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Annual Streamflow Summaries From Four Subalpine Watersheds In Colorado

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by Charles F. Leaf
and Glen E. Brink



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Rocky Mountain Forest and
Range Experiment Station

Forest Service
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Abstract

Streamflow runoff summaries are presented for four experimental watersheds near Fraser and Steamboat Springs, Colorado. Interval of published record varies from 1943-71 at Fraser to 1967-71 at Steamboat Springs.

Keywords: Demonstration watersheds, Fraser Experimental Forest, snowmelt, streamflow, subalpine watersheds, surface waters.

ABOUT THE COVER:

Cipolletti weir on the 3.4-square-mile South Soda Creek watershed in the Routt National Forest near Steamboat Springs, Colorado. The steel deck on the weir ponds is necessary since winter snow in the Park Range often accumulates to depths exceeding 10 feet. This weir is designed to measure a peak flow of 225 cubic feet per second.

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by

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¹Research reported here was conducted and partly financed in cooperation with the Division of Atmospheric Water Resources Management, Bureau of Reclamation, U. S. Department of the Interior.

²Central headquarters maintained at Fort Collins, in cooperation with Colorado State University.

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Annual Streamflow Summaries from Four Subalpine Watersheds in Colorado

Charles F. Leaf and Glen E. Brink

This paper contains computer-generated streamflow runoff summaries from four small subalpine watersheds near Fraser and Steamboat Springs, Colorado (see maps, figs. 1 and 2). Runoff from each watershed is gaged from early spring prior to snowmelt until late fall. The data are processed in FORTRAN IV computer language on Control Data Corporation's (CDC) 6400 computer³ currently in use at the Colorado State University Computer Center in Fort Collins.

Fraser Experimental Forest

Annual summaries of daily runoff from the 1,984-acre East St. Louis Creek watershed are given for the 1943-71 period of record. Map coordinates for the basin are 39°54' north latitude and 105°53' west longitude. Elevations range from 9,500 feet m.s.l. at the stream gage to 12,763 feet. Approximately one-third of East St. Louis Creek is above timberline and two-thirds is forested. Retzer⁴ described the forest cover, geology, and soil; Haeffner⁵ summarized a 33-year record of precipitation and temperature in the area.

³The use of trade and company names is for the benefit of the reader; such use does not constitute an official endorsement or approval of any service or product by the U. S. Department of Agriculture to the exclusion of others that may be suitable.

⁴Retzer, J. L. Soil survey of Fraser alpine area, Colorado. U. S. Dep. Agric. and Colo. Agric. Exp. Stn. Ser. 1956, No. 20, 47 p. Wash. D.C.: Gov. Print. Off. 1962.

⁵Haeffner, Arden D. Daily temperatures and precipitation for subalpine forest, central Colorado. USDA For. Serv. Res. Pap. RM-80, 48 p. Rocky Mt. For. and Range Exp. Stn., Fort Collins, Colo. 1971.

Steamboat Springs (Park Range)

Runoff data from three watersheds in the Park Range are summarized for the 1967-71 period of record. They include:

- A. West Walton Creek: 849 acres, 9,100-9,728 feet m.s.l., 40°22'35" latitude, and 106°42'30" longitude.
- B. North Fish Creek: 1,435 acres, 9,800-10,724 feet m.s.l., 40°32'25" latitude, 106°44' longitude.
- C. South Soda Creek: 2,174 acres, 8,300-10,724 feet m.s.l., 40°32'30" latitude, 106°45' longitude.

These data were obtained in cooperation with the Division of Atmospheric Water Resources Management, Bureau of Reclamation, U. S. Department of the Interior, as part of weather modification studies in the Park Range.

Instrumentation and Data Reduction

All gaging stations are Cipolletti weirs⁶ which are serviced at weekly intervals during the runoff season. From the continuous record of gage height, streamflow volumes can be computed by means of rating equations for any desired time interval. Laboratory-derived rating

⁶The Cipolletti weir on East St. Louis Creek has operated since the 1964 snowmelt runoff season. Prior to this time, flows were gaged by a trapezoidal flume which was rated in place with a velocity head rod.

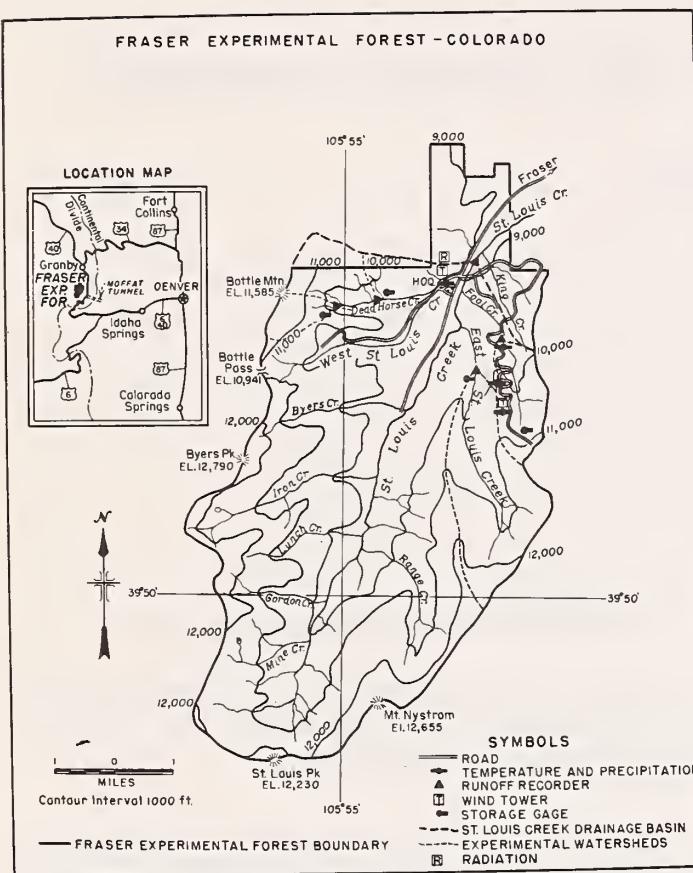


Figure 1.—Location map for East St. Louis Creek, Fraser Experimental Forest.

equations are used to compute stream discharge.⁷

Gage heights are logged on FW-1 strip-chart recorders and Fischer-Porter ADR punched-tape recorders programmed to punch at 15-minute intervals. At the present time (1972), the strip-chart recorders serve only as backup systems for the Fischer-Porters. Both charts and punched tapes are analyzed essentially according to procedures described by Johnson and Dils.⁸

⁷King, H. A. *Handbook of hydraulics*. Ed. 4. 556 p. N.Y.: McGraw-Hill Co. 1954.

⁸Johnson, E. A., and R. W. Dils. *Outline for compiling precipitation, runoff, and ground water data from small watersheds*. U.S. Dep. Agric., For. Serv., Southeast. For. Exp. Stn., Stn. Pap. 68, 40 p. Asheville, N.C. 1956.

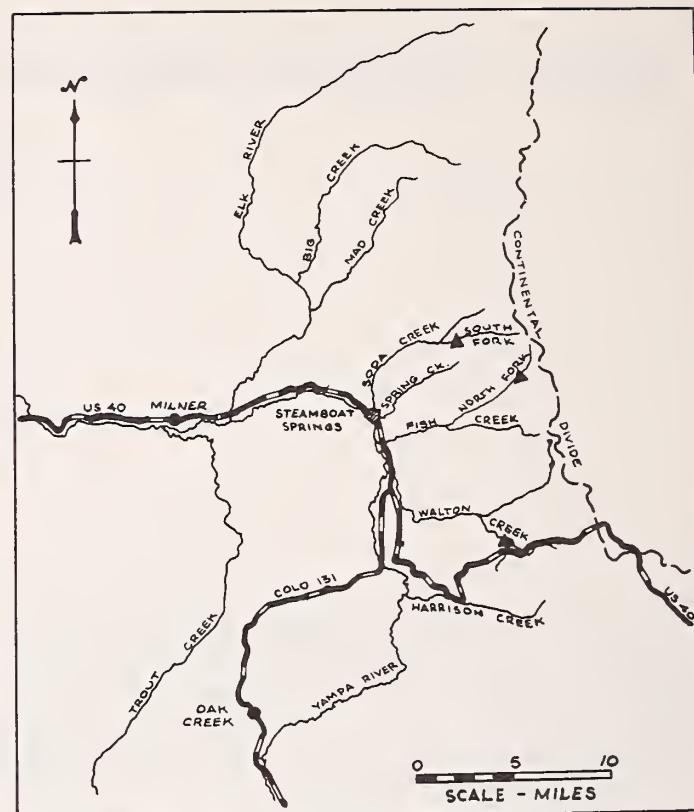


Figure 2.—Location map for Park Range watersheds, near Steamboat Springs.

Automatic Data Processing

The following tables are one-page summaries of the daily streamflow in acre-feet for the period of record. Additional information printed at the bottom of each summary table for each month and for the period of record includes:

1. Total flow in acre-feet
2. Equivalent depth in inches over the whole watershed
3. Maximum daily flow in acre-feet
4. Minimum daily flow (for months only), in acre-feet
5. Equivalent c.f.s. for the seasonal peak daily flow.

Fraser Experimental Forest

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
 EAST ST. LOUIS CREEK 1984 ACRES

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EAST ST. LOUIS CREEK 1984 ACRES

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	1945								DAY	
				APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	
1				1.186	1.186	14.639	35.163	25.285	7.643				1
2				1.186	1.186	13.369	36.119	22.178	7.754				2
3				1.186	1.186	13.896	34.923	25.719	6.995				3
4				1.186	2.750	15.197	33.034	27.123	6.501				4
5				1.186	3.492	18.661	31.785	26.114	6.094				5
6				1.186	3.438	20.119	32.549	26.244	5.368				6
7				1.186	3.418	21.326	32.433	27.370	5.422				7
8				1.186	3.670	20.803	31.153	27.071	5.142				8
9				1.186	3.830	19.335	30.601	45.388	5.316				9
10				1.186	4.213	18.172	31.042	22.597	5.302				10
11				1.186	4.501	18.487	29.967	21.256	5.398				11
12				1.186	4.180	22.000	28.897	21.405	5.438				12
13				1.186	4.999	30.984	27.756	21.135	5.292				13
14				1.186	5.000	36.992	26.437	19.486	5.420				14
15				1.186	4.214	32.917	25.367	18.390	5.480				15
16				1.186	3.936	25.696	25.587	17.227	5.003				16
17				1.186	4.458	24.869	23.983	16.359	4.954				17
18				1.186	5.640	26.885	22.982	16.894	5.137				18
19				1.186	6.218	29.861	24.183	16.190	5.270				19
20				1.186	6.187	30.812	23.971	16.059	5.531				20
21				1.186	5.629	34.173	21.868	16.036	5.702				21
22				1.186	4.971	48.373	22.818	13.988	5.916				22
23				1.186	5.110	48.040	24.732	12.941	6.047				23
24				1.186	6.420	53.502	24.592	12.267	5.955				24
25				1.186	8.228	54.282	22.273	11.825	6.107				25
26				1.186	11.584	50.745	20.199	12.266	6.048				26
27				1.186	14.089	47.526	19.212	11.199	4.915				27
28				1.186	15.899	44.494	18.347	10.128	1.186				28
29				1.186	17.343	37.718	21.367	9.997	1.186				29
30				1.186	18.870	35.700	20.958	9.420	1.186				30
31				.411		17.379		23.655	8.347				31
TOTAL				.411	35.589	203.236	909.588	827.971	587.917	158.723			ACRE FEET
A-F				.002	.215	1.229	5.501	5.007	3.555	.960			INCHES
FLOW													
MAX				.411	1.186	18.870	54.282	36.119	45.388	7.754			MAXIMUM
MIN				.000	1.186	1.186	13.369	18.347	8.347	1.186			MINIMUM

TOTAL SEASONAL RUNOFF 2723.437 ACRE FEET, 16.472 INCHES
SEASONAL PEAK DAILY FLOW 54.283 ACRE FEET, 27.367 CUBIC FEET PER SECOND

DAY	JAN	FEB	MAR	1946								DAY	
				APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	
1				1.186	1.186	9.658	20.320	7.651	5.648				1
2				1.186	4.926	9.775	19.116	7.285	5.538				2
3				1.186	6.414	13.130	18.471	6.984	5.337				3
4				1.186	6.919	21.020	17.555	6.573	5.138				4
5				1.186	7.682	29.556	17.716	6.386	5.029				5
6				1.186	8.106	30.501	17.370	6.431	4.983				6
7				1.186	8.717	42.249	16.492	6.281	4.945				7
8				1.186	9.959	43.828	16.359	6.067	4.836				8
9				1.186	11.566	44.956	15.329	5.955	4.820				9
10				1.186	11.048	47.314	14.669	5.983	4.787				10
11				1.186	9.322	47.134	14.117	6.429	4.941				11
12				1.186	9.002	45.723	13.839	7.157	4.841				12
13				1.186	8.968	43.462	15.011	6.800	5.104				13
14				1.186	8.825	42.239	15.731	6.144	4.743				14
15				1.186	8.946	42.766	13.256	6.028	4.816				15
16				1.186	8.813	42.462	12.397	5.934	4.752				16
17				2.138	8.300	45.341	11.990	5.705	4.619				17
18				1.186	8.365	44.316	11.289	5.569	5.343				18
19				1.186	8.214	36.986	10.890	5.395	5.469				19
20				1.186	8.313	32.675	10.235	5.457	4.995				20
21				1.186	8.568	29.089	9.206	5.461	4.769				21
22				1.186	9.044	28.050	8.780	6.049	4.860				22
23				1.186	9.084	27.724	8.657	7.054	4.808				23
24				1.186	8.604	26.515	8.509	6.830	4.831				24
25				1.186	8.987	25.433	9.041	6.277	4.716				25
26				1.186	10.147	24.884	8.490	5.989	4.628				26
27				1.186	12.870	24.361	7.995	5.759	4.577				27
28				1.186	12.965	23.236	8.009	5.768	4.496				28
29				1.186	11.461	22.239	8.276	6.717	4.513				29
30				1.186	10.444	21.678	8.612	5.738	2.042				30
31					9.881		8.097	5.417					31
TOTAL				36.541	275.661	968.315	395.840	193.288	144.939				ACRE FEET
A-F				.221	1.667	5.856	2.394	1.169	.876				INCHES
FLOW													
MAX				2.138	12.965	47.314	20.320	7.651	5.648				MAXIMUM
MIN				1.186	1.186	9.658	7.995	5.395	2.042				MINIMUM

TOTAL SEASONAL RUNOFF 2014.586 ACRE FEET, 12.185 INCHES
SEASONAL PEAK DAILY FLOW 47.314 ACRE FEET, 23.854 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

TOTAL SEASONAL RUNOFF 2415.212 ACRE FEET, 14.608 INCHES
SEASONAL PEAK DAILY FLOW 57.951 ACRE FEET, 29.216 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	APR	1949							DAY		
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC		
1					3.100	17.768	38.385	12.794	5.958	4.900			1	
2					3.175	16.411	37.739	12.279	5.816	5.079			2	
3					4.117	16.385	41.948	13.068	6.467	4.850			3	
4					4.528	19.175	41.537	12.462	6.350	4.689			4	
5					4.070	21.986	42.573	11.904	5.374	4.538			5	
6					3.436	21.944	41.682	11.485	5.285	4.477			6	
7					3.444	21.366	43.013	10.940	5.414	4.473			7	
8					3.451	22.391	40.053	11.276	5.347	4.474			8	
9					3.745	26.849	39.053	11.943	5.305	4.737			9	
10					4.064	27.285	37.536	10.972	5.353	4.607			10	
11					4.292	33.796	35.204	10.491	5.551	4.788			11	
12					4.957	44.684	30.758	10.050	5.359	4.988			12	
13					4.695	51.357	27.752	9.585	5.202	4.990			13	
14					4.980	51.385	26.873	9.133	5.128	4.859			14	
15					7.485	53.200	25.488	8.737	4.891	4.721			15	
16					7.526	66.845	24.451	8.414	4.819	4.632			16	
17					6.251	76.476	23.959	8.379	4.808	4.853			17	
18					5.816	69.528	23.679	8.033	4.781	4.922			18	
19					6.244	66.918	23.249	7.643	4.688	3.055			19	
20					2.029	6.187	65.345	22.412	7.132	4.396			20	
21					1.664	5.626	61.589	21.071	6.805	4.268			21	
22					1.664	5.410	59.739	19.423	6.786	4.221			22	
23					1.664	5.337	55.707	19.106	6.831	4.416			23	
24					2.088	6.074	51.478	18.496	6.673	4.421			24	
25					2.751	9.279	48.778	17.791	6.574	4.408			25	
26					2.586	13.108	47.443	16.701	6.135	4.487			26	
27					2.870	14.912	47.947	15.883	6.028	4.484			27	
28					3.060	15.883	44.148	15.319	5.893	4.584			28	
29					3.536	19.113	41.195	14.591	5.935	4.688			29	
30					3.360	20.729	38.979	14.023	6.027	5.096			30	
31						19.706		13.366	6.133				31	
TOTAL					27.276	230.751	1288.109	853.127	276.555	151.379	88.640			
A-F					.164	1.395	7.790	5.160	1.672	.915	.536			
INS												ACRE FEET	INCHES	
FLOW														
MAX						3.536	20.729	76.476	43.013	13.068	6.467	5.079		MAXIMUM
MIN						.000	3.100	16.385	13.366	5.893	4.221	.000		MINIMUM

TOTAL SEASONAL RUNOFF 2915.841 ACRE FEET,
SEASONAL PEAK DAILY FLOW 76.476 ACRE FEET, 17.636 INCHES
38.556 CUBIC FEET PER SECOND

DAY	JAN	FEB	MAR	APR	1950							DAY			
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC			
1					3.119	21.120	29.608	7.824	3.970	3.853	3.166		1		
2					3.624	25.536	28.127	7.604	3.944	3.741	3.166		2		
3					4.770	22.150	26.780	8.499	3.934	3.815	4.341		3		
4					4.699	18.982	25.658	7.795	3.664	3.926	3.879		4		
5					3.924	22.832	24.339	7.525	3.560	3.938	4.563		5		
6					3.481	33.584	22.919	7.384	4.080	3.902	3.182		6		
7					3.003	39.970	22.324	7.147	3.871	3.757	3.109		7		
8					3.172	36.099	21.526	6.845	3.651	3.764	1.977		8		
9					3.096	35.555	20.534	6.508	3.829	3.823			9		
10					3.087	44.237	19.861	6.216	4.007	3.825			10		
11					3.589	55.721	19.641	6.343	4.110	3.770			11		
12					4.040	56.800	18.293	6.076	4.727	3.695			12		
13					4.211	59.969	17.379	5.790	4.638	3.678			13		
14					4.931	62.173	16.244	5.482	4.459	3.699			14		
15					5.140	62.318	15.288	5.307	4.336	3.741			15		
16					5.636	76.054	14.604	5.082	4.094	3.704			16		
17					1.466	7.674	14.224	4.913	3.908	3.440			17		
18					2.567	7.414	14.255	4.702	4.025	3.419			18		
19					2.504	7.243	13.802	4.573	5.362	3.433			19		
20					2.510	8.497	13.109	4.695	5.189	3.422			20		
21					2.810	10.542	46.850	12.450	4.638	4.002	3.427		21		
22					3.536	13.300	44.051	11.771	4.793	3.784	3.331		22		
23					3.491	15.061	42.786	11.254	4.858	3.689	3.295		23		
24					3.190	15.189	41.419	10.915	5.000	3.659	3.360		24		
25					2.769	12.842	39.051	10.338	5.837	3.571	3.329		25		
26					2.857	10.400	36.866	10.120	6.336	3.820	3.306		26		
27					3.150	9.334	35.859	9.841	5.667	3.907	3.485		27		
28					3.192	9.120	34.633	9.382	5.169	4.101	3.369		28		
29					3.197	9.470	33.456	9.230	4.902	4.105	3.253		29		
30					3.166	11.919	31.596	9.057	4.743	3.825	3.309		30		
31						15.868		8.387	4.267		3.313		31		
TOTAL					40.410	227.408	1308.764	511.273	182.536	121.840	111.135	27.386			
A-F					.244	1.375	7.915	3.092	1.104	.736	.672	.165			
INS													ACRE FEET	INCHES	
FLOW															
MAX						3.536	15.868	76.517	29.608	8.499	5.362	3.938	4.563		MAXIMUM
MIN						.000	3.003	18.982	8.387	4.267	3.560	3.253	.000		MINIMUM

TOTAL SEASONAL RUNOFF 2530.755 ACRE FEET,
SEASONAL PEAK DAILY FLOW 76.517 ACRE FEET, 15.307 INCHES
38.577 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	1951												DAY
				APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	OEC				
1				2.418	2.418	29.825	53.046									1
2				2.418	2.427	24.165	51.967									2
3				2.418	2.521	21.600	51.077									3
4				2.418	2.773	19.074	51.652									4
5				2.418	3.255	18.025	47.878									5
6				2.418	3.254	18.071	46.337									6
7				2.418	3.417	19.118	46.220									7
8				2.418	3.418	19.739	44.425									8
9				2.418	2.833	19.671	41.097									9
10				2.418	2.703	19.509	38.516									10
11				2.418	2.948	18.785	36.787									11
12				2.418	3.638	18.800	35.162									12
13				2.418	3.647	20.808	32.831									13
14				2.418	3.148	22.961	31.691									14
15				2.418	3.516	26.463	29.930									15
16				2.418	4.668	36.012	28.694									16
17				2.418	4.753	50.424	28.098									17
18				2.418	4.704	67.729	27.277									18
19				2.418	5.720	66.405	25.844									19
20				2.418	7.178	69.197	27.230									20
21				2.418	7.442	84.221	27.129									21
22				2.418	7.662	68.872	25.039									22
23				2.418	9.380	60.475	22.917									23
24				2.418	9.630	57.908	20.884									24
25				2.418	10.041	61.128	19.275									25
26				2.418	11.504	61.973	18.555									26
27				2.418	14.544	61.343	18.225									27
28				2.418	19.917	59.263	17.802									28
29				2.418	22.103	56.537	.983									29
30				2.418	27.935	54.414										30
31				.844		33.328										31
TOTAL				.844	72.541	246.237	1232.530	946.582								ACRE FEET
A-F				.005	.438	1.489	7.454	5.725								INCHES
FLOW																
MAX				.844	2.418	33.328	84.221	53.046								MAXIMUM
MIN				.000	2.418	2.418	18.025	.000								MINIMUM

TOTAL SEASONAL RUNOFF 2498.736 ACRE FEET, 15.113 INCHES
SEASONAL PEAK DAILY FLOW 84.222 ACRE FEET, 42.461 CUBIC FEET PER SECOND

DAY	JAN	FEB	MAR	1952												DAY
				APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	OEC				
1				3.912	21.791	39.201	13.188	8.082	5.326							1
2				4.651	24.838	37.195	12.517	7.480	5.326							2
3				5.855	35.304	35.014	11.806	7.205	5.289							3
4				7.200	41.158	32.677	11.842	7.247	5.141							4
5				8.509	44.918	30.290	11.326	7.001	5.141							5
6				8.435	62.279	30.057	10.546	7.042								6
7				8.090	76.560	27.657	12.179	7.001								7
8				8.657	80.398	25.423	11.091	6.853								8
9				7.962	85.801	24.428	10.174	6.598								9
10				6.659	98.942	23.478	13.237	6.479								10
11				6.262	98.834	22.240	12.386	6.439								11
12				6.700	97.340	21.172	10.524	6.518								12
13				8.904	95.279	20.237	10.589	6.839								13
14				11.672	92.549	19.306	10.337	6.360								14
15				12.336	96.086	18.410	9.605	6.164								15
16				11.885	82.442	17.795	9.022	6.368								16
17				10.245	70.698	17.215	8.801	6.242								17
18				9.244	63.852	17.100	8.475	6.008								18
19				8.944	65.568	16.534	10.292	5.854								19
20				8.647	65.741	15.887	9.491	5.778								20
21				8.669	60.657	15.576	10.412	5.740								21
22				8.171	57.176	14.909	9.560	5.664								22
23				2.995	7.915	52.649	14.310	9.182	5.588							23
24				3.119	7.892	50.452	15.287	8.911	5.626							24
25				3.422	8.468	49.197	17.233	8.188	5.626							25
26				3.901	9.416	46.763	16.397	8.444	5.588							26
27				4.522	10.243	45.199	15.902	8.495	5.513							27
28				4.852	12.303	42.090	15.679	8.779	5.513							28
29				4.332	14.911	41.170	14.544	8.844	5.550							29
30				3.945	16.890	39.773	13.592	8.068	5.450							30
31						18.758		14.035	7.625							31
TOTAL				31.090	288.418	1885.515	658.793	313.952	189.428	26.224						ACRE FEET
A-F				.188	1.744	11.404	3.984	1.898	1.145	.158						INCHES
FLOW																
MAX				4.852	18.758	98.942	39.201	13.237	8.082	5.326						MAXIMUM
MIN				.000	3.912	21.791	13.592	7.625	5.450	.000						MINIMUM

TOTAL SEASONAL RUNOFF 3393.423 ACRE FEET, 20.525 INCHES
SEASONAL PEAK DAILY FLOW 98.943 ACRE FEET, 49.883 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	APR	1953						OCT	NOV	DEC	DAY
					MAY	JUNE	JULY	AUG	SEPT					
1					2.889	27.389	27.162	15.792	6.603					1
2					2.858	32.167	25.830	15.065	6.479					2
3					2.858	31.977	23.905	13.739	6.360					3
4					2.900	30.353	22.360	12.564	6.242					4
5					2.919	27.155	21.024	12.024	6.125					5
6					3.058	27.075	19.116	11.444	6.008					6
7					3.228	26.737	18.101	10.903	5.931					7
8					3.276	29.325	17.463	10.591	5.816					8
9					3.197	39.537	18.909	10.266	5.702					9
10					3.134	48.603	19.155	10.297	5.588					10
11					3.134	53.621	23.055	9.944	5.475					11
12					3.103	63.029	17.951	9.535	5.400					12
13					3.072	71.814	16.488	9.087	5.289					13
14					3.041	63.397	15.699	9.311	5.178					14
15					3.011	58.230	14.907	8.955	5.132					15
16					2.980	54.930	15.386	8.691	5.104					16
17					2.949	53.779	14.716	8.404	4.922					17
18					2.949	55.677	13.162	8.672	4.958					18
19					2.919	62.651	12.170	8.000	4.834					19
20					2.889	55.199	11.787	7.704	4.850					20
21					3.385	47.762	11.540	7.558	4.742					21
22					4.476	43.541	11.588	8.285	4.707					22
23					5.174	40.229	11.062	7.704	4.742					23
24					2.591	7.388	37.514	10.701	7.288	4.778				24
25					2.577	9.161	34.562	10.498	7.083	4.814				25
26					2.776	10.603	32.030	11.020	7.001	4.760				26
27					3.070	16.616	30.780	12.404	7.288	4.635				27
28					3.197	24.318	30.223	12.100	7.351	4.635				28
29					2.919	22.773	27.611	14.530	7.205	4.529				29
30					2.919	18.979	27.461	12.903	7.123					30
31						23.196		13.257	6.758					31
TOTAL					20.051	206.450	1264.374	499.964	291.651	154.354				ACRE FEET
A-F					.121	1.248	7.647	3.023	1.764	.933				INCHES
FLOW														
MAX					3.197	24.318	71.814	27.162	15.792	6.603				MAXIMUM
MIN					.000	2.858	26.737	10.498	6.758	.000				MINIMUM

TOTAL SEASONAL RUNOFF 2436.846 ACRE FEET, 14.739 INCHES
SEASONAL PEAK DAILY FLOW 71.814 ACRE FEET, 36.206 CUBIC FEET PER SECOND

DAY	JAN	FEB	MAR	APR	1954						OCT	NOV	DEC	DAY
					MAY	JUNE	JULY	AUG	SEPT					
1					3.499	11.665	9.672	5.068	3.678	4.088				1
2					3.376	10.669	9.490	4.792	3.777	4.080				2
3					3.944	11.377	8.999	4.565	4.089	4.080				3
4					4.121	12.088	8.603	4.529	4.565	4.080				4
5					4.607	13.184	8.366	6.291	4.216	4.182				5
6					5.105	12.773	8.128	6.062	4.027	4.148				6
7					5.329	11.539	7.915	4.995	3.928	4.148				7
8					6.125	10.600	7.958	4.600	4.514	4.135				8
9					6.877	10.519	7.704	4.747	4.285	4.285				9
10					6.887	10.634	7.495	4.778	3.899	4.494				10
11					6.669	10.617	7.247	4.995	3.811	4.445				11
12					7.540	10.945	7.019	6.125	3.944	4.355				12
13					7.427	11.441	7.518	5.475	3.877	4.407				13
14					3.228	8.845	7.786	7.815	5.068	3.749	4.269			14
15					2.980	9.645	11.124	7.453	5.068	3.678	4.925			15
16					2.965	10.328	11.470	7.646	5.141	3.646	4.529			16
17					3.408	12.245	12.920	8.456	4.869	3.580	4.636			17
18					3.493	12.989	14.089	7.083	4.494	3.577				18
19					3.475	15.419	14.562	6.852	4.529	3.580				19
20					3.323	17.552	14.130	6.598	4.565	3.510				20
21					3.260	17.939	13.482	6.518	4.886	3.613				21
22					3.460	16.944	13.364	6.758	4.635	3.548				22
23					3.865	15.328	13.263	6.479	4.460	4.854				23
24					4.334	13.935	13.263	6.047	4.182	5.781				24
25					4.015	14.179	13.045	6.314	4.216	4.216				25
26					3.642	14.017	12.465	6.264	4.114	4.182				26
27					3.882	12.716	12.962	5.778	4.046	5.420				27
28					4.503	11.912	11.369	5.513	3.945	4.850				28
29					4.498	11.347	10.359	5.215	3.877	4.148				29
30					3.754	12.246	9.807	5.438	3.750	4.389				30
31						12.317		5.178	3.678					31
TOTAL					62.093	311.424	361.525	223.533	146.562	122.946	73.292			ACRE FEET
A-F					.375	1.883	2.186	1.352	.886	.743	.443			INCHES
FLOW														
MAX					4.503	17.939	14.562	9.672	6.291	5.781	4.925			MAXIMUM
MIN					.000	3.376	9.807	5.178	3.678	3.510	.000			MINIMUM

TOTAL SEASONAL RUNOFF 1301.379 ACRE FEET, 7.871 INCHES
SEASONAL PEAK DAILY FLOW 17.940 ACRE FEET, 9.045 CUBIC FEET PER SECOND

**STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES**

DAY	JAN	FEB	MAR	APR	1955							OCT	NOV	DEC	DAY
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV				
1					5.254	17.268	21.259	11.318	6.482	4.389				1	
2					5.404	17.261	20.571	10.732	6.087	4.424				2	
3					4.865	15.861	19.688	11.072	5.970	4.398				3	
4					4.541	14.776	18.889	11.417	5.854	4.490				4	
5					5.290	14.000	18.102	10.779	5.740	4.922				5	
6					6.399	14.756	17.380	11.291	5.664					6	
7					8.086	16.996	16.940	11.511	5.626					7	
8					7.840	22.681	16.235	11.067	5.513					8	
9					5.734	19.861	15.700	9.580	5.289					9	
10					5.734	17.435	15.275	8.778	5.141					10	
11					6.307	19.343	16.606	8.472	5.141					11	
12					7.263	22.706	14.983	8.214	4.995					12	
13					8.639	24.969	13.974	8.410	4.916					13	
14					11.652	26.715	13.012	9.720	4.995					14	
15					13.603	24.520	12.268	8.742	4.995					15	
16					10.862	25.141	11.903	8.262	4.958					16	
17					10.171	25.147	11.015	8.603	4.894					17	
18					8.291	24.520	10.392	11.809	4.886					18	
19					7.495	24.520	9.898	9.697	4.850					19	
20					9.471	24.569	9.445	8.761	5.146					20	
21					12.911	25.328	9.310	7.939	4.886					21	
22					14.265	26.398	8.911	7.615	4.707					22	
23					14.856	27.226	14.281	7.453	4.565					23	
24					16.471	26.406	11.926	7.412	4.621					24	
25					16.060	25.203	11.799	7.912	4.671					25	
26					14.779	24.335	14.856	8.599	4.603					26	
27					12.420	23.538	14.731	10.087	4.600					27	
28					11.367	22.887	14.589	9.168	4.565					28	
29					12.455	22.569	13.470	7.788	4.601					29	
30					4.778	12.794	21.970	12.121	7.413	4.389				30	
31					14.717		11.540	6.883						31	
TOTAL					4.778	306.011	658.921	441.085	286.522	153.361	22.626			ACRE FEET	
A-F					.028	1.850	3.985	2.667	1.732	.927	.136			INCHES	
FLOW					4.778	16.471	27.226	21.259	11.809	6.482	4.922			MAXIMUM	
MAX					.000	4.541	14.000	8.911	6.883	4.389	.000			MINIMUM	

TOTAL SEASONAL RUNOFF 1873.308 ACRE FEET, 11.330 INCHES
SEASONAL PEAK DAILY FLOW 27.226 ACRE FEET, 13.726 CUBIC FEET PER SECOND

DAY	JAN	FEB	MAR	APR	1956							OCT	NOV	DEC	DAY
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV				
1					55.856	21.318	9.196	5.252	3.679					1	
2					60.470	19.654	8.822	5.252	3.678					2	
3					3.748	57.787	19.019	6.314	5.141	3.711				3	
4					4.379	55.299	17.989	5.829	5.141	3.744				4	
5					5.061	55.389	17.070	5.236	5.141	3.744				5	
6					6.179	54.452	16.451	5.252	5.141	3.744				6	
7					7.776	51.897	15.528	4.885	5.104	3.777				7	
8					8.976	50.967	14.896	4.762	5.104	3.800				8	
9					8.527	50.101	14.691	4.303	5.141	3.744				9	
10					7.875	49.471	13.690	4.204	5.013	3.711				10	
11					8.221	49.547	13.674	4.182	5.031	3.811				11	
12					9.933	52.937	13.486	4.320	5.104	3.811				12	
13					9.466	46.239	14.038	4.459	4.995					13	
14					7.788	45.242	13.234	4.320	4.850					14	
15					7.267	43.732	12.181	5.885	4.742					15	
16					7.965	41.058	10.602	5.741	4.635					16	
17					11.203	38.516	9.572	4.958	4.494					17	
18					15.046	38.014	9.190	4.882	4.389					18	
19					17.604	35.643	8.661	11.337	4.285					19	
20					20.305	33.597	8.147	9.292	4.182					20	
21					24.149	31.157	7.547	7.042	4.080					21	
22					30.846	29.038	10.140	6.879	3.978					22	
23					38.446	27.547	8.089	6.718	3.877					23	
24					36.503	26.145	6.844	6.558	3.777					24	
25					39.100	25.736	6.357	6.479	3.678					25	
26					41.279	24.644	6.207	6.281	3.678					26	
27					39.236	23.416	6.711	5.952	3.580					27	
28					39.821	22.569	6.047	5.740	3.678					28	
29					43.381	21.851	23.824	5.550	3.646					29	
30					46.789	22.475	13.076	5.513	3.646					30	
31					52.453		11.851	5.442						31	
TOTAL					599.336	1220.804	389.801	186.347	135.773	44.961				ACRE FEET	
A-F					3.625	7.383	2.357	1.127	.821	.271				INCHES	
FLOW					52.453	60.470	23.824	11.337	5.252	3.811				MAXIMUM	
MAX					.000	21.851	6.047	4.182	3.580	.000				MINIMUM	

TOTAL SEASONAL RUNOFF 2577.024 ACRE FEET, 15.587 INCHES
SEASONAL PEAK DAILY FLOW 60.470 ACRE FEET, 30.487 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	APR	MAY	1957						DAY	
						JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	
1						6.006	106.951	23.294	9.853	5.513			1
2						8.477	97.001	21.614	9.355	5.475			2
3						11.581	102.429	19.002	8.910	5.289			3
4						14.315	97.531	18.437	8.560				4
5						18.923	83.321	19.380	8.257				5
6						24.549	75.802	20.107	8.257				6
7						31.080	72.471	17.490	8.086				7
8						34.567	63.954	16.559	7.788				8
9						35.965	57.400	16.127	7.426				9
10						37.612	54.794	15.593	7.123				10
11						35.868	51.694	15.169	7.164				11
12						37.962	49.548	14.907	7.029				12
13						39.785	46.964	14.283	7.628				13
14						32.263	45.236	13.719	8.326				14
15						34.434	41.868	16.702	8.845				15
16						31.962	40.545	15.064	8.205				16
17						27.566	41.103	13.923	7.620				17
18						32.986	48.166	13.364	6.960				18
19						39.045	49.851	13.364	6.839				19
20						42.052	37.657	13.062	7.288				20
21						40.723	35.188	15.408	7.042				21
22						35.018	33.459	14.128	6.541				22
23						36.538	33.459	13.062	6.638				23
24					2.709	41.900	30.888	12.515	6.399				24
25					2.701	52.801	28.516	12.416	6.164				25
26						2.791	63.773	28.386	12.416	6.047			26
27						2.927	71.351	27.804	11.878	5.854			27
28						3.113	80.823	26.019	11.205	5.854			28
29						3.736	105.120	26.145	11.492	5.702			29
30						4.737	111.015	25.516	10.968	5.588			30
31						5.499		23.966	10.452				31
TOTAL						28.216	1216.076	1583.648	467.114	221.365	16.277		
A-F						.170	7.355	9.578	2.825	1.338	.098		ACRE FEET INCHES
FLOW						5.499	111.015	106.951	23.294	9.853	5.513		
MAX						.000	6.006	23.966	10.452	5.588	.000		MAXIMUM MINIMUM

TOTAL SEASONAL RUNOFF 3532.699 ACRE FEET, 21.367 INCHES
SEASONAL PEAK DAILY FLOW 111.016 ACRE FEET, 55.970 CUBIC FEET PER SECOND

DAY	JAN	FEB	MAR	APR	MAY	1958						DAY	
						JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	
1						50.684	15.806	6.120	4.046	3.548			1
2						51.617	15.593	5.961	3.911	3.515			2
3						52.106	14.750	5.855	3.991	3.399			3
4						50.635	14.257	5.882	3.944	3.387			4
5						52.127	13.617	5.836	3.811	3.387			5
6						53.486	12.713	5.570	3.744	3.419			6
7						53.437	12.138	5.394	3.761	3.371			7
8					4.110	50.717	11.338	5.181	3.740	3.355			8
9					3.613	47.396	10.593	5.104	3.819	3.260			9
10					3.800	43.075	10.137	5.651	3.811	3.291			10
11					5.416	39.548	9.793	5.404	3.777	3.323			11
12					7.883	35.713	9.519	5.129	3.777	3.291			12
13					7.830	33.169	9.158	4.995	3.744	3.291			13
14					6.914	32.075	8.904	4.958	3.744				14
15					5.908	29.613	8.686	4.958	3.744				15
16					5.874	28.527	8.516	4.779	3.711				16
17					6.443	27.067	8.430	4.778	3.711				17
18					8.533	27.219	8.902	6.940	3.678				18
19					11.393	25.956	8.307	5.748	3.678				19
20					15.338	24.520	7.964	5.031	3.678				20
21					20.081	25.444	7.831	4.778	3.646				21
22					22.951	22.870	7.711	5.319	3.646				22
23					31.367	21.941	7.254	5.463	3.646				23
24					37.190	21.495	7.105	5.113	3.613				24
25					40.162	22.268	7.100	4.707	3.586				25
26					41.955	20.497	6.996	4.523	3.483				26
27					45.039	18.551	8.638	4.494	3.483				27
28					50.177	17.767	6.957	4.454	3.451				28
29					54.365	17.214	6.301	4.494	3.411				29
30					54.179	16.528	6.631	4.260	3.515				30
31					52.356		6.399	4.148					31
TOTAL					542.888	1013.279	298.060	161.044	111.317	43.843			ACRE FEET INCHES
A-F					3.283	6.128	1.802	.974	.673	.265			
FLOW					54.365	53.486	15.806	6.940	4.046	3.548			
MAX					.000	16.528	6.301	4.148	3.411	.000			MAXIMUM MINIMUM

TOTAL SEASONAL RUNOFF 2170.434 ACRE FEET, 13.128 INCHES
SEASONAL PEAK DAILY FLOW 54.365 ACRE FEET, 27.409 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	APR	MAY	1959						DAY	
						JUNE	JULY	AUG	SEPT	OCT	NOV	OEC	
1						15.766	23.843	10.732	4.671				1
2						16.464	22.637	10.014	4.600				2
3						16.559	22.269	10.190	4.459				3
4						18.132	21.614	9.990	4.320				4
5						21.241	21.141	8.822	4.182				5
6						26.003	20.381	8.790	4.046				6
7						31.152	19.918	8.257	3.944				7
8						34.013	19.401	7.662	3.811				8
9						37.235	18.269	7.412	3.711				9
10						39.590	17.656	7.123	3.678				10
11						3.275	39.771	16.995	7.001	3.646			11
12						4.435	39.347	15.918	7.123	3.515			12
13						5.273	39.121	15.699	6.920	3.419			13
14						6.847	39.307	15.117	6.758	3.516			14
15						8.210	40.133	14.762	6.678	3.734			15
16						8.355	42.670	15.171	6.439	5.366			16
17						8.296	41.196	13.806	6.242	4.600			17
18						8.826	39.022	13.162	6.086	4.343			18
19						8.563	39.893	12.614	6.125	3.911			19
20						7.704	43.817	12.024	6.125	3.877			20
21						7.001	41.759	11.540	6.086	3.711			21
22						6.668	38.049	10.826	5.778	3.613			22
23						7.092	34.841	10.405	5.513	3.811			23
24						8.773	33.859	10.098	6.465	4.012			24
25						8.818	32.572	9.960	6.518	4.148			25
26						8.075	30.215	10.513	6.008	4.182			26
27						8.814	29.248	9.724	5.588	4.389			27
28						11.049	30.773	9.221	5.252	4.355			28
29						13.331	27.162	9.760	5.104	4.285			29
30						14.424	25.384	10.609	4.958	4.074			30
31						14.979		12.637	4.814				31
TOTAL						178.818	984.308	467.703	216.589	121.944			ACRE FEET
A-F						1.081	5.953	2.828	1.310	.737			INCHES
FLOW													
MAX						14.979	43.817	23.843	10.732	5.366			MAXIMUM
MIN						.000	15.766	9.221	4.814	3.419			MINIMUM

TOTAL SEASONAL RUNOFF 1969.366 ACRE FEET, 11.911 INCHES
SEASONAL PEAK DAILY FLOW 43.818 ACRE FEET, 22.091 CUBIC FEET PER SECOND

DAY	JAN	FEB	MAR	APR	MAY	1960						DAY	
						JUNE	JULY	AUG	SEPT	OCT	NOV	OEC	
1						22.854	25.778	11.011	5.215	3.678			1
2						26.240	25.016	9.671	5.178	3.666			2
3						30.808	25.016	9.087	5.141	3.613			3
4						35.453	23.843	8.735	5.068	3.580			4
5						39.096	22.629	8.528	5.031	3.548			5
6						35.165	21.792	8.257	4.958	3.646			6
7						33.678	21.053	7.958	4.922	3.548			7
8						34.631	19.918	7.704	4.850	3.613			8
9						34.867	18.945	7.495	4.814	3.697			9
10						3.527	36.000	19.358	7.329	4.742			10
11						4.706	35.764	19.059	7.083	4.707			11
12						6.694	34.227	17.989	6.839	4.635			12
13						8.465	35.175	17.269	6.715	4.600			13
14						8.960	36.675	16.451	6.718	4.529			14
15						8.989	40.320	15.954	6.439	4.494			15
16						9.088	47.918	15.169	6.439	4.459			16
17						9.884	52.325	14.802	6.518	4.389			17
18						9.854	51.823	14.283	6.203	4.355			18
19						8.801	51.514	13.719	6.044	4.285			19
20						8.473	50.418	13.213	5.893	4.251			20
21						9.746	46.149	12.812	5.664	4.182			21
22						10.828	42.439	12.632	5.588	4.148			22
23						13.491	38.157	12.515	5.854	4.080			23
24						13.775	34.870	12.170	5.513	4.046			24
25						12.962	32.844	11.492	6.125	3.978			25
26						14.159	31.693	10.968	5.438	3.911			26
27						16.722	30.356	10.405	5.400	3.877			27
28						16.506	29.038	10.711	5.363	3.811			28
29						17.804	28.062	10.656	5.326	3.777			29
30						19.459	27.098	10.128	5.289	3.711			30
31						20.620		11.682	5.252				31
TOTAL						253.522	1105.671	507.443	211.489	134.159	92.416		ACRE FEET
A-F						1.533	6.687	3.069	1.279	.811	.558		INCHES
FLOW													
MAX						20.620	52.325	25.778	11.011	5.215	3.744		MAXIMUM
MIN						.000	22.854	10.128	5.252	3.711	.000		MINIMUM

TOTAL SEASONAL RUNOFF 2304.705 ACRE FEET, 13.940 INCHES
SEASONAL PEAK DAILY FLOW 52.325 ACRE FEET, 26.380 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	APR	MAY	JUNE	1961					OCT	NOV	DEC	DAY
							JULY	AUG	SEPT	OCT	NOV				
1						24.229	19.719	8.090	5.702					1	
2						23.463	18.381	7.873	5.626					2	
3						20.536	17.324	7.370	5.893					3	
4						19.194	17.662	7.001	5.970					4	
5						19.114	16.611	6.718	6.770					5	
6						19.773	15.169	6.583	7.217					6	
7						23.634	15.169	6.524	7.873					7	
8						28.441	14.646	7.106	8.534					8	
9						29.770	14.231	6.540	8.962					9	
10						30.381	13.465	6.320	8.738					10	
11						30.945	13.062	6.047	7.746					11	
12						31.592	12.443	6.793	7.329					12	
13						30.727	11.636	6.558	7.042					13	
14						28.570	11.348	6.164	6.879					14	
15						26.985	11.205	5.854	6.718					15	
16						27.627	10.325	6.620	6.718					16	
17						28.285	9.762	7.468	6.638					17	
18						27.099	9.310	6.360	6.963					18	
19					5.800	26.934	8.981	5.816	7.288					19	
20					6.770	28.021	10.652	5.550	7.412					20	
21					7.267	27.039	11.379	5.550	7.559					21	
22					8.086	26.107	9.625	5.438	7.453					22	
23					8.284	24.684	8.485	5.212	7.288					23	
24					8.276	23.599	8.214	6.048	6.809					24	
25					8.766	22.569	8.257	6.008	7.796					25	
26					10.151	21.970	8.177	5.702	7.070					26	
27					12.331	21.068	7.662	5.400	6.880					27	
28					13.030	20.614	8.371	5.178	7.083					28	
29					16.376	19.918	7.704	4.995	7.453					29	
30					19.382	20.123	7.736	6.149	6.920					30	
31					20.822		8.300	6.320						31	
TOTAL					145.346	753.028	365.026	195.371	214.343					ACRE FEET	
A-F					.879	4.554	2.207	1.181	1.296					INCHES	
FLOW														MAXIMUM	
MAX						20.822	31.592	19.719	8.090	8.962				MINIMUM	
MIN						.000	19.114	7.662	4.995	5.626					

TOTAL SEASONAL RUNOFF 1673.116 ACRE FEET, 10.120 INCHES
SEASONAL PEAK DAILY FLOW 31.592 ACRE FEET, 15.928 CUBIC FEET PER SECOND

DAY	JAN	FEB	MAR	APR	MAY	JUNE	1962					OCT	NOV	DEC	DAY
							JULY	AUG	SEPT	OCT	NOV				
1					4.958	20.091	61.414	14.517	6.758					1	
2					4.922	22.210	52.199	13.823	6.608					2	
3					4.958	25.273	49.668	13.841	6.439					3	
4					5.400	29.699	46.838	13.531	6.320					4	
5					6.028	31.396	44.179	12.534						5	
6					6.926	33.524	42.174	11.968						6	
7					8.885	35.027	40.649	11.412						7	
8					10.743	30.688	39.236	10.992						8	
9					13.755	29.384	37.942	10.697						9	
10					16.300	30.986	35.224	10.348						10	
11					19.489	33.865	32.664	10.307						11	
12					23.721	40.612	35.367	10.036						12	
13					24.832	46.501	32.435	9.716						13	
14					22.857	48.349	29.563	9.310						14	
15					21.851	47.994	27.226	9.078						15	
16					21.732	44.179	25.016	8.869						16	
17					20.439	40.838	24.229	8.757						17	
18					19.059	40.399	23.173	8.720						18	
19				4.001	21.614	43.381	22.149	10.761						19	
20				4.565	20.091	49.376	21.459	9.332						20	
21					4.529	19.173	54.633	20.776	9.356					21	
22					3.923	17.809	57.007	19.925	8.688					22	
23					4.046	17.490	55.057	19.885	8.584					23	
24					4.837	18.832	54.349	19.549	8.683					24	
25					5.457	19.860	54.329	19.093	8.128					25	
26					5.588	20.178	54.803	18.663	7.831					26	
27					4.922	20.033	54.124	17.643	7.661					27	
28					5.068	18.832	53.266	16.668	7.370					28	
29					5.400	18.388	55.848	15.913	7.123					29	
30					4.995	18.550	60.038	15.337	7.040					30	
31					19.458		15.077	6.879						31	
TOTAL					57.336	507.180	1277.243	921.349	305.907	26.127				ACRE FEET	
A-F					.346	3.067	7.725	5.572	1.850	.158				INCHES	
FLOW														MAXIMUM	
MAX						5.588	24.832	60.038	61.414	14.517	6.758			MINIMUM	
MIN						.000	4.922	20.091	15.077	6.879	.000				

TOTAL SEASONAL RUNOFF 3095.146 ACRE FEET, 18.721 INCHES
SEASONAL PEAK DAILY FLOW 61.414 ACRE FEET, 30.963 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	APR	MAY	JUNE	1963						DAY
							JULY	AUG	SEPT	OCT	NOV	DEC	
1						14.066	8.490						1
2						15.633	8.247						2
3						15.500	8.161						3
4					3.308	14.508	7.868						4
5					3.739	14.204	7.594						5
6					4.748	13.788	7.352						6
7					5.702	13.799	6.982						7
8					6.425	13.484	6.951						8
9					8.325	14.360	7.780						9
10					8.996	13.044	7.428						10
11					9.838	11.796	6.879						11
12					8.952	11.626	6.605						12
13					9.285	12.604	6.439						13
14					9.825	13.086	6.281						14
15					12.490	14.612	6.198						15
16					12.083	18.213	6.047						16
17					12.301	14.457	5.931						17
18					13.944	14.894	5.740						18
19					12.727	13.783	5.491						19
20					12.966	13.117	5.326						20
21					13.156	12.590	5.293						21
22					12.679	12.126	7.059						22
23					13.235	11.884	6.667						23
24					14.493	11.311	5.993						24
25					13.995	10.989							25
26					13.291	10.430							26
27					13.515	10.049							27
28					14.104	9.608							28
29					14.298	9.266							29
30					14.562	8.647							30
31					14.068								31
TOTAL													
A-F					307.068	387.488	162.813						ACRE FEET
INS					1.857	2.343	.984						INCHES
FLOW													
MAX					14.562	18.213	8.490						MAXIMUM
MIN					.000	8.647	.000						MINIMUM

TOTAL SEASONAL RUNOFF 857.371 ACRE FEET, 5.186 INCHES
SEASONAL PEAK DAILY FLOW 18.214 ACRE FEET, 9.183 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	APR	MAY	JUNE	1964						DAY
							JULY	AUG	SEPT	OCT	NOV	DEC	
1						15.527	18.646	8.871	3.663	3.871			1
2						15.562	18.234	8.409	3.509	3.782			2
3						15.667	18.030	8.304	3.583	3.683			3
4						15.751	17.800	9.188	3.554	3.634			4
5						16.569	17.703	8.162	3.522	3.595			5
6						18.909	17.221	7.444	3.532	3.655			6
7						24.319	16.459	9.329	3.504	3.500			7
8						23.228	15.921	8.698	3.446	3.419			8
9						22.592	15.426	7.429	3.563	3.395			9
10						26.222	15.496	6.919	3.464	3.508			10
11						27.236	14.872	6.485	3.437	3.495			11
12						26.389	14.168	6.363	3.422	3.443			12
13						25.646	13.715	6.241	3.387	3.419			13
14					3.806	23.514	13.369	6.053	3.458				14
15					5.191	24.871	12.778	5.824	3.442				15
16					6.262	26.448	12.459	5.874	3.512				16
17					4.576	26.949	12.073	5.706	3.483				17
18					9.066	25.021	11.653	5.377	3.732				18
19					9.525	23.345	10.953	5.767	4.541				19
20					11.724	22.430	10.473	5.680	4.242				20
21					15.173	21.307	9.908	5.285	4.126				21
22					16.890	20.469	10.013	5.015	4.046				22
23					17.218	19.508	10.161	4.788	3.960				23
24					18.883	19.718	10.967	4.663	3.911				24
25					22.442	20.111	9.394	4.651	3.971				25
26					25.288	20.018	8.915	4.503	4.115				26
27					23.313	19.874	8.508	5.137	4.221				27
28					22.016	19.998	8.217	4.481	4.051				28
29					19.757	19.642	8.143	4.535	3.946				29
30					17.802	19.005	8.803	4.221	3.898				30
31					16.373		9.995	3.912					31
TOTAL					265.314	645.861	400.492	193.333	112.256	46.404			ACRE FEET
A-F					1.604	3.906	2.422	1.169	.678	.280			INCHES
INS													
FLOW					25.288	27.236	18.646	9.329	4.541	3.871			MAXIMUM
MAX					.000	15.527	8.143	3.912	3.387	.000			MINIMUM

TOTAL SEASONAL RUNOFF 1663.662 ACRE FEET, 10.062 INCHES
SEASONAL PEAK DAILY FLOW 27.236 ACRE FEET, 13.732 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	APR	1965							DEC	DAY	
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV			
1					2.404	10.995	40.867	20.208	7.712	5.200		1		
2					2.907	11.356	41.046	18.362	7.673	5.533		2		
3					2.955	13.299	39.904	18.272	7.825	5.587		3		
4					3.175	13.513	37.771	17.173	7.483	5.308		4		
5					3.004	12.728	36.206	16.331	7.232	5.083		5		
6					2.504	13.304	34.807	15.269	6.997	4.853		6		
7					2.276	15.299	33.290	14.624	6.993	4.757		7		
8					2.240	19.238	32.391	13.894	6.701	4.609		8		
9					2.002	23.574	30.250	13.220	6.341	4.468		9		
10					1.830	32.269	29.404	12.716	6.130	4.394		10		
11					1.871	34.090	28.435	12.342	6.252	4.286		11		
12					2.217	29.464	28.333	11.935	6.146	4.116		12		
13					2.534	37.130	26.935	11.538	5.770	4.105		13		
14					2.304	42.136	25.057	11.287	5.544	4.067		14		
15					2.181	49.566	23.149	11.042	5.491	4.046		15		
16					2.402	62.038	24.545	10.510	5.187	4.080		16		
17					3.873	75.643	23.990	10.813	5.497	4.080		17		
18					4.342	74.988	24.357	12.380	5.560	4.046		18		
19					4.748	70.553	24.572	15.472	5.920	4.080		19		
20					6.312	66.071	23.128	14.051	5.785	4.106		20		
21					8.072	61.821	22.257	11.769	5.279	4.176		21		
22					1.627	12.168	57.092	23.453	10.749	5.503	1.819		22	
23					1.757	13.990	52.293	26.688	10.386	5.492		23		
24					1.666	11.791	51.650	27.046	10.041	5.808		24		
25					1.323	9.357	49.358	24.073	9.436	5.815		25		
26					1.208	8.130	45.867	22.167	8.951	5.691		26		
27					1.231	7.325	42.533	21.994	8.686	5.385		27		
28					1.217	6.865	42.865	20.327	8.579	5.347		28		
29					1.369	7.321	43.448	18.743	8.684	5.489		29		
30					1.822	9.289	41.678	18.858	8.420	5.072		30		
31					10.720		24.933	8.037				31		
TOTAL					13.226	163.125	1195.873	858.991	385.192	183.133	96.807			
A-F					.079	.986	7.233	5.195	2.329	1.107	.585		ACRE FEET	
INS													INCHES	
FLOW														
MAX					1.822	13.990	75.643	41.046	20.208	7.825	5.587		MAXIMUM	
MIN					.000	1.830	10.995	18.743	8.037	5.072	.000		MINIMUM	
TOTAL SEASONAL RUNOFF					2896.349 ACRE FEET,					17.518 INCHES				
SEASONAL PEAK DAILY FLOW					75.643 ACRE FEET,					38.136 CU8IC FEET PER SECOND				

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	APR	1966							DEC	DAY	
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV			
1					2.682	18.319	12.468	5.336	3.418	2.595		1		
2					3.145	20.084	11.622	5.224	3.357	2.680		2		
3					3.633	20.383	10.912	5.734	3.228	2.940		3		
4					4.590	19.502	10.214	6.621	3.032	2.952		4		
5					5.557	18.124	10.026	5.657	2.810	3.040		5		
6					6.316	16.441	9.833	5.373	2.986	3.022		6		
7					7.779	15.981	9.231	4.778	3.031	3.018		7		
8					7.693	16.572	8.869	4.413	3.106	2.943		8		
9					7.511	15.740	8.722	4.555	2.805	2.768		9		
10					7.264	16.695	8.775	4.423	2.770	2.589		10		
11					5.616	16.697	9.317	4.168	2.986	2.745		11		
12					4.793	16.562	8.788	4.809	3.093	1.282		12		
13					4.704	15.242	8.568	4.298	3.051			13		
14					4.526	15.363	8.059	4.128	2.869			14		
15					4.711	16.166	7.643	3.884	3.479			15		
16					6.038	16.074	7.444	3.648	3.225			16		
17					6.593	15.710	9.029	3.619	3.085			17		
18					7.336	15.645	8.756	3.515	2.848			18		
19					8.119	15.251	9.146	4.054	2.677			19		
20					9.558	15.321	8.311	4.304	2.660			20		
21					12.260	14.529	8.794	3.868	2.614			21		
22					15.111	14.359	15.446	3.490	2.510			22		
23					1.817	13.453	14.108	7.752	3.344	2.498		23		
24					1.791	13.782	13.608	7.335	3.276	2.557		24		
25					2.009	16.737	13.245	7.114	3.111	2.980		25		
26					2.305	15.534	13.165	7.017	3.051	2.629		26		
27					2.020	13.901	12.402	7.347	3.026	2.617		27		
28					1.802	13.805	12.007	6.464	2.898	2.594		28		
29					2.045	15.797	11.858	5.973	2.799	2.519		29		
30					2.445	20.295	12.603	5.686	2.884	2.584		30		
31					19.807		5.459	3.088				31		
TOTAL					16.239	288.662	467.772	270.132	127.391	86.631	32.580			
A-F					.098	1.745	2.829	1.633	.770	.523	.197		ACRE FEET	
INS													INCHES	
FLOW														
MAX					2.445	20.295	20.383	15.446	6.621	3.479	3.040		MAXIMUM	
MIN					.000	2.682	11.858	5.459	2.799	2.498	.000		MINIMUM	
TOTAL SEASONAL RUNOFF					1289.410 ACRE FEET,					7.799 INCHES				
SEASONAL PEAK DAILY FLOW					20.384 ACRE FEET,					10.277 CU8IC FEET PER SECOND				

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	APR	1967							DEC	DAY
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV		
1					1.689	18.272	31.550	8.351	4.074	3.139		1	
2					1.689	25.494	30.025	8.129	3.963	3.006		2	
3					1.740	29.079	28.300	7.610	3.787	2.905		3	
4					1.689	30.572	28.553	8.505	3.570	3.411		4	
5					1.689	31.415	26.953	7.679	3.506	3.448		5	
6					1.689	34.992	25.267	7.736	3.451	3.319		6	
7					1.801	32.817	24.282	8.988	3.338	3.234		7	
8					2.232	30.904	23.204	7.969	3.392	3.144		8	
9					2.936	33.606	21.670	7.891	3.540	3.072		9	
10					3.048	31.181	20.053	7.363	3.420	3.174		10	
11					2.667	29.775	19.095	6.708	3.848	3.011		11	
12					2.813	28.570	18.290	6.343	5.756	2.858		12	
13					2.890	28.100	17.010	6.053	3.859	2.790		13	
14					2.389	28.202	16.317	5.949	3.584	1.695		14	
15					2.220	26.486	16.916	5.890	3.491	2.651		15	
16					2.277	26.938	15.423	5.679	3.777	2.690		16	
17					3.146	27.770	15.074	5.323	3.685	2.877		17	
18					4.274	35.215	14.304	5.113	3.638	.868		18	
19					5.224	34.998	13.680	5.001	4.258			19	
20					1.539	5.287	13.060	4.839	3.733			20	
21					1.558	6.501	38.140	12.368	4.676	3.371		21	
22					1.539	9.726	39.487	12.029	4.604	3.276		22	
23					1.589	12.743	39.259	12.161	4.481	3.247		23	
24					1.539	16.674	38.264	11.433	4.317	3.151		24	
25					1.539	20.107	36.124	10.831	4.232	3.836		25	
26					1.550	19.670	35.924	10.362	4.167	5.116		26	
27					1.589	14.710	34.893	10.246	4.147	4.102		27	
28					1.763	15.782	33.475	9.591	4.107	3.494		28	
29					2.190	16.666	31.683	9.130	4.046	3.345		29	
30					2.949	16.300	31.757	8.726	4.253	3.261		30	
31						14.793		8.766	4.181				31
TOTAL					19.350	217.076	960.695	534.683	184.346	111.885	51.300		
A-F					.117	1.312	5.810	3.233	1.115	.676	.310		
INS												ACRE FEET	INCHES
FLOW													
MAX					2.949	20.107	39.487	31.550	8.988	5.756	3.448		MAXIMUM
MIN					.000	1.689	18.272	8.726	4.046	3.151	.000		MINIMUM

TOTAL SEASONAL RUNOFF 2079.340 ACRE FEET, 12.577 INCHES
SEASONAL PEAK DAILY FLOW 39.487 ACRE FEET, 19.908 CUBIC FEET PER SECOND

DAY	JAN	FEB	MAR	APR	1968							DEC	DAY
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV		
1					1.442	11.109	24.937	8.342	4.270	3.588		1	
2					1.442	14.472	23.270	7.798	4.187	3.419		2	
3					1.689	19.113	22.030	7.926	5.650	3.419		3	
4					1.689	22.240	20.932	7.239	5.269	3.419		4	
5					1.689	29.888	20.866	8.228	5.224	3.419		5	
6					1.689	32.804	19.230	9.487	5.024	3.393		6	
7					1.689	30.529	17.994	8.627	4.683	3.356		7	
8					1.689	30.035	17.491	7.940	4.277	3.357		8	
9					1.689	27.885	16.483	9.558	3.992	3.419		9	
10					1.689	24.620	16.314	9.174	3.922	3.419		10	
11					1.689	23.137	15.944	8.148	3.814	3.419		11	
12					1.689	29.832	15.104	7.511	3.758	3.419		12	
13					1.689	37.943	14.452	7.194	3.744	3.419		13	
14					1.689	36.111	13.873	8.058	3.762	3.419		14	
15					1.689	36.415	13.227	7.264	4.053	3.419		15	
16					1.689	41.594	12.532	6.496	4.299	1.282		16	
17					1.689	44.003	12.021	6.132	4.112			17	
18					1.689	48.394	11.552	5.996	4.870			18	
19					1.689	48.907	11.321	5.691	4.759			19	
20					1.689	52.907	10.843	5.522	4.513			20	
21					2.133	52.505	10.341	5.514	4.263			21	
22					3.446	49.523	10.334	5.346	4.080			22	
23					3.518	46.763	10.340	5.331	4.080			23	
24					3.066	44.286	9.754	5.001	3.919			24	
25					2.798	39.701	9.460	4.960	3.744			25	
26					2.614	34.741	9.120	4.776	3.666			26	
27					2.696	34.610	8.945	5.281	3.599			27	
28					3.819	34.554	9.541	5.144	3.453			28	
29					5.778	32.208	9.095	5.162	3.744			29	
30					7.484	28.278	9.168	4.642	3.592			30	
31					9.351		9.033	4.496					31
TOTAL					80.005	1039.120	435.563	207.997	126.337	52.590			
A-F					.483	6.285	2.634	1.258	.764	.318			
INS												ACRE FEET	INCHES
FLOW													
MAX					9.351	52.907	24.937	9.558	5.650	3.588			MAXIMUM
MIN					1.442	11.109	8.945	4.496	3.453	.000			MINIMUM

TOTAL SEASONAL RUNOFF 1941.615 ACRE FEET, 11.744 INCHES
SEASONAL PEAK DAILY FLOW 52.907 ACRE FEET, 26.674 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	APR	MAY	JUNE	1969						DAY
							JULY	AUG	SEPT	OCT	NOV	DEC	
1					2.762	34.368	28.750	9.247	4.623	3.863			1
2					3.361	30.283	29.877	8.822	4.478	3.683			2
3					3.959	29.777	31.685	8.583	4.480	4.052			3
4					3.820	32.702	32.087	8.369	4.516	4.080			4
5					3.689	41.562	29.488	8.002	4.310	4.080			5
6					3.909	42.864	27.011	7.516	4.086	4.091			6
7					4.513	37.832	25.062	7.141	4.170	4.269			7
8					3.252	41.959	23.128	6.781	4.049	4.029			8
9					3.307	41.019	21.997	6.601	4.223	4.020			9
10					3.795	37.198	21.080	6.370	4.356	3.961			10
11					4.405	31.924	20.059	6.484	4.164	3.842			11
12					4.683	28.562	19.341	6.650	4.108	7.711			12
13					5.048	26.789	19.177	6.492	3.933	7.031			13
14					5.434	25.861	19.852	6.012	3.894				14
15					5.621	29.026	18.931	5.676	5.077				15
16					5.631	30.924	17.574	5.632	5.660				16
17					6.430	32.163	16.625	5.584	5.279				17
18					7.600	30.772	15.794	6.218	4.623				18
19					9.455	32.290	15.641	5.827	4.273				19
20					12.816	38.651	17.971	7.659	4.184				20
21					15.108	40.711	15.317	8.569	4.108				21
22					16.946	36.699	14.071	6.368	4.313				22
23					2.470	16.844	34.296	13.137	5.691	4.162			23
24					2.799	16.791	37.511	12.378	5.338	3.964			24
25					2.612	20.819	30.571	11.819	5.047	3.888			25
26					2.220	30.067	26.767	11.377	4.938	3.744			26
27					2.085	38.412	27.146	10.913	4.765	3.744			27
28					1.949	40.599	28.442	10.337	4.839	3.744			28
29					1.786	43.126	28.747	10.549	6.084	3.643			29
30					2.113	49.434	28.419	10.341	5.837	3.877			30
31					44.743		9.805	4.978					31
TOTAL					18.038	436.397	995.851	581.190	202.136	127.692	58.717		
A-F					.109	2.639	6.023	3.515	1.222	.772	.355		
INS												ACRE FEET	
FLOW												INCHES	
MAX					2.799	49.434	42.864	32.087	9.247	5.660	7.711		
MIN					.000	2.762	25.861	9.805	4.765	3.643	.000		
												MAXIMUM	
												MINIMUM	

TOTAL SEASONAL RUNOFF 2420.024 ACRE FEET, 14.637 INCHES
SEASONAL PEAK DAILY FLOW 49.435 ACRE FEET, 24.923 CUBIC FEET PER SECOND

DAY	JAN	FEB	MAR	APR	MAY	JUNE	1970						DAY
							JULY	AUG	SEPT	OCT	NOV	DEC	
1						31.565	45.156	10.614	6.323	4.865			1
2						30.834	41.204	10.408	6.281	4.745			2
3						32.526	38.567	14.098	5.841	4.731			3
4					1.632	36.084	37.643	12.064	5.651	4.653			4
5					1.870	38.658	37.179	11.197	5.884	4.498			5
6					2.207	38.443	34.215	12.067	6.545	4.524			6
7					2.625	39.664	31.733	12.831	5.754	4.445			7
8					2.384	42.643	31.203	11.571	5.358	5.849			8
9					2.073	44.121	31.696	10.287	5.327	8.431			9
10					2.159	42.505	28.897	9.660	5.001	4.497			10
11					3.124	38.904	28.096	9.173	4.952	4.424			11
12					4.323	35.044	26.487	8.799	5.087	4.457			12
13					4.589	34.776	24.324	8.440	7.373	4.381			13
14					4.118	35.634	23.654	8.398	5.378	1.664			14
15					3.798	37.239	22.262	8.258	5.084				15
16					5.388	40.561	20.837	7.941	4.978				16
17					7.807	45.309	19.706	7.692	4.778				17
18					10.304	52.680	18.838	7.315	4.697				18
19					11.898	55.887	18.152	7.349	4.609				19
20					15.829	55.344	16.994	9.379	4.462				20
21					19.830	57.400	16.057	10.853	4.689				21
22					23.096	59.962	15.710	8.882	5.069				22
23					25.312	59.846	15.315	7.727	5.041				23
24					27.578	60.068	14.550	7.297	4.892				24
25					29.247	61.829	13.867	6.893	5.598				25
26					32.777	61.433	13.481	6.969	5.070				26
27					35.890	60.048	12.869	7.092	4.983				27
28					35.100	58.414	12.229	6.727	5.023				28
29					35.489	55.524	11.879	6.415	5.161				29
30					38.919	50.237	11.397	6.257	5.120				30
31					36.477		11.030	6.095					31
TOTAL					425.858	1393.196	725.243	278.760	160.024	66.172			
A-F					2.575	8.426	4.386	1.686	.967	.400			
INS												ACRE FEET	
FLOW												INCHES	
MAX					38.919	61.829	45.156	14.098	7.373	8.431			
MIN					.000	30.834	11.030	6.095	4.462	.000			
												MAXIMUM	
												MINIMUM	

TOTAL SEASONAL RUNOFF 3049.256 ACRE FEET, 18.443 INCHES
SEASONAL PEAK DAILY FLOW 61.830 ACRE FEET, 31.172 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
EAST ST. LOUIS CREEK 1984 ACRES

DAY	JAN	FEB	MAR	APR	MAY	JUNE	1971						DAY
							JULY	AUG	SEPT	OCT	NOV	DEC	
1					1.032	14.085	52.631	11.316	6.366	4.099			1
2					1.233	16.775	49.898	10.842	6.265	3.953			2
3					1.653	20.675	47.928	10.307	6.229	4.080			3
4					1.845	20.274	45.840	10.090	6.583	4.164			4
5					1.663	19.572	43.443	9.664	6.997	4.064			5
6					1.442	22.375	40.920	9.186	6.730	4.067			6
7					1.496	25.376	38.507	8.850	8.402	3.992			7
8					1.674	26.056	36.643	8.467	10.555	3.772			8
9					1.442	26.317	36.712	9.057	6.088	3.779			9
10					1.442	26.376	34.480	8.773	5.366	3.623			10
11					1.442	28.503	32.423	8.197	5.047	3.443			11
12					1.666	29.221	30.818	8.599	4.960	3.419			12
13					2.311	30.386	29.829	7.945	4.649	3.412			13
14					2.680	35.335	28.533	7.498	4.642	3.271			14
15					2.701	42.482	26.845	7.242	4.664	3.143			15
16					4.247	49.202	25.365	6.918	4.686	3.162			16
17					4.967	56.278	24.086	6.855	4.646	3.245			17
18					3.825	65.355	23.999	6.742	4.871	3.129			18
19					3.575	71.261	24.519	6.937	4.988	2.954			19
20					3.419	72.360	21.884	6.496	4.837	3.868			20
21					1.023	3.705	74.500	20.914	6.103	4.778	3.275		21
22					.989	4.259	75.655	21.210	5.871	4.749	3.100		22
23					.951	4.187	77.653	19.046	6.139	4.619	3.068		23
24					.944	3.758	80.721	17.665	6.178	4.601	3.025		24
25					.859	3.906	80.761	16.619	6.261	4.468	3.040		25
26					.923	4.806	79.548	15.551	7.073	4.424	2.903		26
27					.806	7.239	76.436	14.631	7.342	4.112	1.289		27
28					.800	10.596	71.076	13.996	9.592	4.083			28
29					.785	14.133	64.290	13.344	9.120	4.055			29
30					.808	13.525	57.892	12.630	7.764	4.080			30
31						12.311		12.027	6.900				31
TOTAL					8.892	128.196	1436.811	872.948	248.341	161.555	92.351		ACRE FEET
A-F					.053	.775	8.690	5.279	1.502	.977	.558		INCHES
FLOW													
MAX					1.023	14.133	80.761	52.631	11.316	10.555	4.164		MAXIMUM
MIN					.000	1.032	14.085	12.027	5.871	4.055	.000		MINIMUM

TOTAL SEASONAL RUNOFF 2949.098 ACRE FEET, 17.837 INCHES
SEASONAL PEAK DAILY FLOW 80.761 ACRE FEET, 40.717 CUBIC FEET PER SECOND

Steamboat Springs (Park Range)

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
WEST WALTON CREEK 849 ACRES

A. West Walton Creek:

DAY	JAN	FEB	MAR	APR	MAY	JUNE	1967						DAY
							JULY	AUG	SEPT	OCT	NOV	DEC	
1					3.915	46.139	5.336	.597	.389	.427			1
2					3.261	47.440	4.740	.499	.195	.427			2
3					2.935	43.346	4.347	.427	.151	.427			3
4					2.734	39.228	4.479	.464	.151	.754			4
5					2.531	36.223	3.821	.427	.151	.922			5
6					2.590	32.885	3.480	.427	.151	1.000			6
7					2.862	28.609	5.071	.640	.151	1.000			7
8					5.598	28.219	4.375	.996	.662	1.026			8
9					9.394	23.208	3.303	.934	.848	.817			9
10					9.531	19.974	2.588	1.066	.339	.699			10
11					9.321	18.025	2.486	.524	.198	.583			11
12					9.211	18.110	2.538	.419	.775	.427			12
13					8.413	17.341	2.051	.371	.462	.427			13
14					1.213	6.732	20.101	1.822	.307	.280			14
15					2.259	5.715	21.516	1.935	.427	.379			15
16					3.043	5.482	16.448	1.895	.427	.427	3.88		16
17					2.350	9.519	15.842	3.830	.427	.427	3.86		17
18					2.310	16.678	14.337	3.833	.427	.687	.394		18
19					3.171	24.943	14.400	1.813	.427	1.774	.389		19
20					4.177	28.720	15.998	1.498	.427	1.087	.386		20
21					3.135	33.603	13.166	1.303	.427	.691	.382		21
22					2.639	49.696	14.865	1.110	.408	.540	.355		22
23					2.315	54.047	11.622	1.051	.162	.427	.361		23
24					2.150	67.050	10.084	1.284	.148	.427	.470		24
25					1.949	60.607	10.784	1.140	.151	.427	.434		25
26					1.857	56.508	11.744	.989	.151	.455	.213		26
27					1.892	51.227	8.194	.902	.151	.462			27
28					2.523	50.235	7.718	.868	.228	.427			28
29					4.243	46.683	6.786	.720	.549	.427			29
30					5.722	43.369	5.910	.675	.581	.427			30
31						40.086		.597	.305				31
TOTAL					46.954	723.208	618.278	75.896	13.935	14.408	13.959		ACRE FEET
A-F					.663	10.222	8.738	1.072	.196	.203	.197		INCHES
FLOW													
MAX					5.722	67.050	47.440	5.336	1.066	1.774	1.026		MAXIMUM
MIN					.000	2.531	5.910	.597	.148	.151	.000		MINIMUM

TOTAL SEASONAL RUNOFF 1506.641 ACRE FEET, 21.295 INCHES
SEASONAL PEAK DAILY FLOW 67.050 ACRE FEET, 33.804 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
WEST WALTON CREEK 849 ACRES

DAY	JAN	FEB	MAR	APR	1968							DAY	
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	
1					2.955	55.146	9.824	1.350	.360	.567			1
2					4.305	64.854	8.497	1.198	.389	.567			2
3					5.489	61.574	7.579	3.248	.777	.427			3
4					7.453	60.153	6.838	1.433	1.153	.427			4
5					8.414	66.516	6.830	1.135	.744	.427			5
6					8.123	65.031	6.001	1.126	.531	.410			6
7					5.877	61.219	5.246	.861	.427	.872			7
8					4.918	54.396	5.759	.765	.427	1.383			8
9					5.369	48.876	5.087	.937	.427	1.054			9
10					7.276	46.163	4.403	1.105	.350	1.424			10
11					9.123	57.619	3.885	1.502	.293	1.740			11
12					12.543	68.113	4.117	1.256	.335	1.367			12
13					11.485	77.334	4.073	1.210	.371	1.072			13
14					8.524	70.423	3.170	6.252	.510	.844			14
15					7.454	75.828	2.919	2.229	.510	1.022			15
16					6.526	70.267	2.799	1.277	.689	.736			16
17					5.747	64.714	2.397	.961	.785				17
18					.359	5.226	58.149	2.158	1.087	1.579			18
19					.785	5.647	50.434	1.949	.872	.970			19
20					.785	7.085	44.885	1.859	.701	.648			20
21					24.830	11.066	38.636	1.832	.605	1.002			21
22					.785	17.979	32.930	1.792	.633	.864			22
23					.785	22.368	28.429	1.835	1.685	.727			23
24					.785	17.655	24.854	1.584	.931	.597			24
25					.989	13.246	20.597	1.628	.703	.761			25
26					.989	12.013	17.038	1.339	.467	.675			26
27					.371	12.569	15.294	1.833	.902	.597			27
28					.989	19.465	14.267	1.917	1.181	.597			28
29					1.189	30.298	12.711	1.347	.685	.628			29
30					1.828	38.325	11.438	2.228	.441	.570			30
31					44.663		1.649	.403					31
TOTAL					35.473	379.199	1437.904	114.390	39.154	19.309	14.346		ACRE FEET
A-F					.501	5.359	20.323	1.616	.553	.272	.202		INCHES
FLOW					24.830	44.663	77.334	9.824	6.252	1.579	1.740		MAXIMUM
MAX					.000	2.955	11.438	1.339	.403	.293	.000		MINIMUM

TOTAL SEASONAL RUNOFF 2039.778 ACRE FEET,
SEASONAL PEAK DAILY FLOW 77.334 ACRE FEET. 28.831 INCHES
77.334 ACRE FEET. 38.989 CUBIC FEET PER SECOND

DAY	JAN	FEB	MAR	APR	1969							DAY	
					10.410	16.283	4.098	1.080	.601	1.403			
1					16.128	14.025	3.717	.989	.597	1.068		1	
2					22.936	12.580	3.511	.989	.556	1.468		2	
3					25.663	11.612	3.504	.989	.533	1.208		3	
4					27.212	10.948	3.415	.989	.597	1.208		4	
5					31.044	10.754	3.079	.904	.581	1.204		5	
6					30.798	10.060	2.710	.795	.528	1.335		6	
7					28.870	9.374	2.397	.734	.551	1.458		7	
8					33.965	8.540	2.155	.605	.617	1.462		8	
9					37.837	8.227	2.053	.597	.785	1.238		9	
10					41.724	9.208	1.840	.601	.665	1.208		10	
11					46.944	8.906	1.751	.907	.597	1.208		11	
12					45.304	7.551	1.568	.974	.597	1.442		12	
13					40.299	6.594	2.887	.742	.597	1.112		13	
14					35.565	10.667	2.495	.689	.733	.717		14	
15					32.161	14.563	1.786	.597	1.150			15	
16					2.402	39.686	11.034	1.571	.597	.576			16
17					2.843	45.135	7.718	1.442	.956	.597			17
18					3.551	50.977	6.304	1.442	1.356	.597			18
19					5.678	54.675	5.711	3.585	1.343	.597			19
20					8.102	53.532	5.150	1.934	1.319	1.890			20
21					9.964	48.001	5.251	1.506	.802	2.678			21
22					13.975	40.569	6.443	1.320	.728	1.134			22
23					26.711	37.317	11.662	1.208	.656	.902			23
24					21.644	33.582	9.387	1.122	.597	.785			24
25					16.430	31.191	8.930	1.092	.597	.777			25
26					10.738	29.034	7.409	.989	.597	.597			26
27					8.667	25.668	5.569	.989	.671	.597			27
28					8.022	23.110	5.010	2.012	1.840	.597			28
29					8.104	21.916	4.605	3.098	1.283	1.596			29
30					19.282		1.328	.821					30
31													31
TOTAL					146.835	1060.549	270.090	67.620	27.357	24.218	18.747		ACRE FEET
A-F					2.075	14.990	3.817	.955	.386	.342	.264		INCHES
FLOW					26.711	54.675	16.283	4.098	1.840	2.678	1.468		MAXIMUM
MAX					.000	10.410	4.605	.989	.597	.528	.000		MINIMUM

TOTAL SEASONAL RUNOFF 1615.419 ACRE FEET, 22.833 INCHES
SEASONAL PEAK DAILY FLOW 54.676 ACRE FEET, 27.565 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
WEST WALTON CREEK 849 ACRES

DAY	JAN	FEB	MAR	APR	MAY	JUNE	1970						OCT	NOV	DEC	DAY
							JULY	AUG	SEPT	OCT	NOV	DEC				
1					1.400	34.585	10.839	1.208	.989	.814					1	
2					1.208	39.863	9.038	1.206	.972	.785					2	
3					1.592	47.640	7.763	1.147	.887	.785					3	
4					3.586	57.611	6.835	.989	.844	.785					4	
5					7.663	60.478	6.585	1.101	1.021	.785					5	
6					10.820	60.967	6.326	1.081	1.590	2.344					6	
7					12.088	54.034	5.911	1.384	2.338	2.245					7	
8					10.095	58.581	5.135	1.000	1.234	1.815					8	
9					7.092	53.262	5.880	.807	.968	1.298					9	
10					5.425	45.669	7.912	.742	.785	1.652					10	
11					5.979	35.584	5.145	.703	.785	1.643					11	
12					12.678	27.864	3.812	.597	.850	2.167					12	
13					10.432	32.270	3.272	.620	1.366						13	
14					11.078	33.647	2.683	.597	1.928						14	
15					4.916	34.849	2.311	.597	1.194						15	
16					11.466	37.720	2.082	.597	.989						16	
17					27.632	39.026	1.874	.597	.887						17	
18					31.625	37.526	1.934	.628	.874						18	
19					35.336	35.557	2.110	.936	.785						19	
20					42.950	32.003	1.978	.989	.785						20	
21					.871	55.480	29.849	1.783	1.539	.843					21	
22					.717	52.339	28.109	3.796	1.167	1.364					22	
23					.670	51.240	25.814	8.095	.978	1.215					23	
24					.633	45.937	23.685	2.425	.923	.989					24	
25					.765	47.404	21.950	1.928	.989	1.085					25	
26					1.653	51.627	20.100	1.748	.989	1.012					26	
27					2.911	57.030	18.307	1.843	.989	.989					27	
28					3.675	44.618	16.716	1.730	1.067	.963					28	
29					2.270	36.478	15.570	1.599	.989	.891					29	
30					1.592	43.973	13.032	1.643	.902	.793					30	
31						39.672		1.760	.810						31	
TOTAL					15.762	780.874	1071.881	127.788	28.882	32.229	17.123				ACRE FEET	
A-F					.222	11.037	15.150	1.806	.408	.455	.242				INCHES	
FLOW																
MAX					3.675	57.030	60.967	10.839	1.539	2.338	2.344				MAXIMUM	
MIN					.000	1.208	13.032	1.599	.597	.785	.000				MINIMUM	

TOTAL SEASONAL RUNOFF 2074.543 ACRE FEET, 29.322 INCHES
SEASONAL PEAK DAILY FLOW 60.967 ACRE FEET, 30.737 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
WEST WALTON CREEK 849 ACRES

DAY	JAN	FEB	MAR	APR	MAY	JUNE	1971						OCT	NOV	DEC	DAY
							JULY	AUG	SEPT	OCT	NOV	DEC				
1					5.895	35.111	13.201	1.208	.427	.598					1	
2					8.564	43.698	11.823	1.208	.427	.583					2	
3					12.100	52.603	10.784	1.208	.504	.623					3	
4					15.527	44.096	9.778	1.208	.885	.679					4	
5					13.776	43.399	8.773	1.112	1.132	.612					5	
6					13.041	45.281	8.095	.989	.940	.549					6	
7					14.315	54.929	7.457	.989	1.443	.427					7	
8					13.874	56.579	7.395	.987	1.531	.155					8	
9					12.971	57.766	6.665	.985	.829						9	
10					10.801	55.587	5.859	.966	.710						10	
11					10.595	54.207	5.112	.910	.597						11	
12					14.631	57.127	4.611	.989	.597						12	
13					21.483	61.656	4.170	.970	.597						13	
14					30.955	65.619	3.849	.986	.590						14	
15					8.867	35.456	61.518	3.546	.846	.574					15	
16					11.152	37.961	57.656	3.279	.785	.446					16	
17					11.888	31.943	53.579	3.084	.427	.624					17	
18					10.760	22.873	47.155	2.938	.427	.697					18	
19					9.561	17.767	43.750	3.309	.427	.720					19	
20					7.643	14.704	40.412	2.906	.427	.726					20	
21					6.247	14.811	37.108	3.456	.427	.779					21	
22					5.339	19.724	34.477	3.244	.427	.751					22	
23					4.880	19.470	31.953	2.700	.427	.582					23	
24					5.726	19.358	29.262	2.430	.427	.427					24	
25					6.133	25.416	26.555	2.327	.427	.419					25	
26					6.631	32.561	24.018	2.152	.427	.277					26	
27					5.604	44.628	21.657	1.949	.427	.277					27	
28					5.141	52.872	19.176	1.946	.441	.277					28	
29					4.918	62.317	17.931	1.794	.749	.277					29	
30					4.750	55.917	15.136	1.703	.597	.380					30	
31						37.649		1.689	.537						31	
TOTAL					115.248	743.970	1289.015	152.038	23.382	19.457	4.230				ACRE FEET	
A-F					1.628	10.515	18.219	2.148	.330	.275	.059				INCHES	
FLOW																
MAX					11.888	62.317	65.619	13.201	1.208	1.531	.679				MAXIMUM	
MIN					.000	5.895	15.136	1.689	.427	.277	.000				MINIMUM	

TOTAL SEASONAL RUNOFF 2347.343 ACRE FEET, 33.178 INCHES
SEASONAL PEAK DAILY FLOW 65.619 ACRE FEET, 33.083 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
NORTH FISH CREEK 1435 ACRES

B. North Fish Creek:

DAY	JAN	FEB	MAR	APR	MAY	JUNE	1967						DAY
							JULY	AUG	SEPT	OCT	NOV	OEC	
1						57.468	110.489	2.546	1.244	1.236			1
2						82.581	92.556	2.700	.655	1.681			2
3						104.789	73.962	2.297	.471	1.236			3
4						101.462	83.605	2.077	.448	1.447			4
5						106.161	66.204	1.598	.324	1.654			5
6						106.919	52.359	1.651	.450	2.266			6
7						105.805	68.361	6.312	.460	2.311			7
8						98.986	49.007	3.926	.897	4.109			8
9						86.158	35.982	2.593	1.130	3.185			9
10					6.264	89.741	27.071	2.615	.746	2.363			10
11					5.181	94.385	24.749	2.862	2.784	1.822			11
12					3.929	85.799	19.922	2.084	5.214	1.578			12
13					3.749	78.886	15.872	1.566	1.551	1.429			13
14					3.241	85.263	14.206	1.340	1.354	1.499			14
15					2.872	70.593	16.109	1.684	1.493	1.294			15
16					3.192	76.530	13.303	1.478	2.235	1.058			16
17					5.046	97.070	39.145	1.280	1.964	1.511			17
18					9.550	137.886	24.065	1.034	3.492	1.436			18
19					14.612	152.034	13.755	.981	5.770	1.252			19
20					20.005	167.709	10.294	1.236	3.136	1.119			20
21					26.406	146.863	8.057	1.236	2.033	1.117			21
22					38.927	157.245	6.759	1.016	1.669	1.055			22
23					58.404	149.826	9.877	.810	1.453	.929			23
24					71.223	148.361	10.670	.644	1.652	1.070			24
25					89.412	153.852	6.746	.598	1.896	.675			25
26					91.876	147.928	4.974	.554	1.803				26
27					78.775	145.604	4.197	.497	1.529				27
28					75.612	106.508	3.372	.491	1.391				28
29					69.826	118.742	2.896	1.344	1.236				29
30					63.827	120.999	2.547	1.193	1.236				30
31					55.735		2.574	1.386					31
TOTAL					797.673	3382.169	913.699	53.644	51.733	40.346			ACRE FEET
A-F					6.670	28.282	7.640	.448	.432	.337			INCHES
FLOW													
MAX					91.876	167.709	110.489	6.312	5.770	4.109			MAXIMUM
MIN					.000	57.468	2.547	.491	.324	.000			MINIMUM

TOTAL SEASONAL RUNOFF 5239.267 ACRE FEET, 43.813 INCHES
SEASONAL PEAK DAILY FLOW 167.709 ACRE FEET, 84.552 CU8IC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
NORTH FISH CREEK 1435 ACRES

DAY	JAN	FEB	MAR	APR	MAY	JUNE	1968						DAY
							JULY	AUG	SEPT	OCT	NOV	OEC	
1						70.424	104.666	7.179	1.119	.746			1
2						81.627	107.790	4.035	1.034	.746			2
3						89.788	106.016	6.134	3.189	.726			3
4						90.889	104.128	3.653	3.359	.737			4
5						103.449	86.438	2.820	1.911	.864			5
6						108.380	82.304	2.843	1.294	.746			6
7						111.337	73.519	2.460	1.042	1.262			7
8						93.849	60.493	2.124	.881	1.602			8
9					5.336	72.311	60.522	3.512	.795	1.513			9
10					6.421	59.478	59.499	3.303	.680	.604			10
11					8.676	49.103	48.223	5.492	.651				11
12					11.121	72.090	39.362	3.820	.728				12
13					10.428	105.678	33.738	5.134	.746				13
14					8.520	114.878	26.345	13.911	1.052				14
15					7.091	130.965	22.297	8.155	1.171				15
16					6.143	135.744	17.899	4.233	1.365				16
17					5.468	134.953	14.338	3.067	1.511				17
18					5.189	155.574	11.608	4.802	4.047				18
19					5.627	154.146	9.846	2.796	1.781				19
20					6.105	176.656	8.690	2.412	1.152				20
21					8.662	177.395	16.376	2.436	2.440				21
22					16.247	176.600	8.280	2.274	2.264				22
23					21.790	166.677	8.609	3.363	1.574				23
24					16.212	145.930	6.235	2.400	1.236				24
25					11.787	123.754	5.455	1.568	1.029				25
26					9.754	137.095	5.103	1.376	.981				26
27					9.715	170.710	4.455	1.663	.851				27
28					16.366	169.341	4.109	2.201	.746				28
29					31.078	163.600	3.700	3.270	.746				29
30					45.695	107.961	8.982	1.848	.746				30
31					57.530		5.658	1.355					31
TOTAL					330.973	3650.396	1154.700	115.653	42.136	9.551			ACRE FEET
A-F					2.767	30.525	9.656	.967	.352	.079			INCHES
FLOW													
MAX					57.530	177.395	107.790	13.911	4.047	1.602			MAXIMUM
MIN					.000	49.103	3.700	1.355	.651	.000			MINIMUM

TOTAL SEASONAL RUNOFF 5303.412 ACRE FEET, 44.349 INCHES
SEASONAL PEAK DAILY FLOW 177.396 ACRE FEET, 89.436 CU8IC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
NORTH FISH CREEK 1435 ACRES

DAY	JAN	FEB	MAR	APR	1969							DAY		
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC		
1					10.784	86.924	36.890	3.233	.881	4.496			1	
2					15.757	89.211	32.860	2.504	.829	2.857			2	
3					22.947	95.059	32.695	2.357	.693	3.546			3	
4					26.639	110.898	30.340	2.070	.788	3.498			4	
5					26.541	143.953	43.059	1.825	.713	3.606			5	
6					26.111	138.131	25.777	1.775	.651	3.809			6	
7					28.819	124.474	18.366	1.461	.618	4.159			7	
8					24.007	132.103	14.922	1.304	.609	4.352			8	
9					31.521	128.917	12.409	1.153	.745	3.803			9	
10					43.298	89.946	10.460	1.111	6.520	3.498			10	
11					50.688	62.168	8.964	1.120	1.799	3.498			11	
12					53.564	59.746	7.746	4.672	1.122	3.498			12	
13					61.271	66.686	6.799	2.429	1.421	3.498			13	
14					60.120	72.717	8.984	2.930	1.548	3.498			14	
15					50.273	70.537	8.711	2.243	2.147	2.113			15	
16					39.498	101.729	5.732	1.103	2.451				16	
17					44.441	81.451	4.715	1.098	1.960				17	
18					68.681	84.484	4.593	2.131	1.320				18	
19					84.758	88.816	4.435	1.649	1.049				19	
20					89.909	84.227	25.842	4.628	.981				20	
21					94.413	82.022	8.811	2.563	1.712				21	
22					105.218	73.195	5.330	1.408	7.738				22	
23					8.888	105.183	63.364	4.180	1.122	4.941			23	
24					13.167	110.695	98.652	3.465	1.055	2.508			24	
25					16.195	125.222	46.989	3.029	.952	1.675			25	
26					13.771	134.403	39.897	2.598	.866	1.393			26	
27					10.920	132.909	60.465	2.216	.868	1.180			27	
28					8.313	130.907	69.441	1.957	.998	1.119			28	
29					8.226	142.815	48.134	6.028	2.550	.981			29	
30					9.029	144.873	40.334	17.594	1.611	7.892			30	
31					119.305		5.758	1.114					31	
TOTAL					88.512	2205.587	2534.684	405.279	57.919	59.999	53.735		ACRE FEET	
A-F					.740	18.443	21.195	3.389	.484	.501	.449		INCHES	
FLOW					16.195	144.873	143.953	43.059	4.672	7.892	4.496		MAXIMUM	
MAX					.000	10.784	39.897	1.957	.866	.609	.000		MINIMUM	
					TOTAL SEASONAL RUNOFF	5405.718 ACRE FEET,			45.205 INCHES					
					SEASONAL PEAK DAILY FLOW	144.874 ACRE FEET,			73.040 CUBIC FEET PER SECOND					

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
NORTH FISH CREEK 1435 ACRES

DAY	JAN	FEB	MAR	APR	1970							DAY		
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC		
1					65.234	138.107	4.007	.981	1.529				1	
2					75.055	132.313	3.710	1.029	1.511				2	
3					93.462	125.746	3.567	1.018	1.496				3	
4					107.282	125.841	3.536	.939	1.459				4	
5					116.532	113.869	4.689	2.197	1.491				5	
6					109.740	119.041	3.634	3.522	2.328				6	
7					105.159	89.183	6.146	6.236	3.211				7	
8					130.732	75.182	4.137	18.110					8	
9					127.486	71.998	3.026	8.068					9	
10					102.440	61.730	2.518	3.517					10	
11					63.455	49.608	2.288	2.227					11	
12					11.046	45.852	40.634	2.135	3.430				12	
13					11.290	43.253	33.755	2.040	4.105				13	
14					10.234	56.481	27.556	1.980	2.521				14	
15					8.574	58.565	22.434	1.999	2.021				15	
16					10.420	63.753	18.539	1.957	1.855				16	
17					19.665	90.968	16.116	2.342	1.690				17	
18					29.314	124.090	14.116	2.216	1.493				18	
19					43.657	139.316	21.636	1.864	1.405				19	
20					52.704	147.886	15.289	2.167	1.268				20	
21					62.260	159.204	12.632	2.830	1.751				21	
22					63.315	167.508	17.986	2.066	3.713				22	
23					63.464	184.582	23.677	1.719	3.835				23	
24					68.890	190.658	11.104	1.524	3.192				24	
25					72.575	197.630	9.180	1.408	2.892				25	
26					85.219	196.571	9.848	1.431	3.332				26	
27					98.428	199.964	8.445	1.511	2.803				27	
28					86.631	223.357	6.901	1.119	2.250				28	
29					69.407	193.653	5.972	1.106	2.005				29	
30					84.655	160.453	5.190	.981	1.733				30	
31					82.664		4.652	.949					31	
TOTAL					1034.419	3740.340	1428.293	76.615	95.151	13.028			ACRE FEET	
A-F					8.650	31.278	11.943	.640	.795	.108			INCHES	
FLOW					98.428	223.357	138.107	6.146	18.110	3.211			MAXIMUM	
MAX					.000	43.253	4.652	.949	.939	.000			MINIMUM	
					TOTAL SEASONAL RUNOFF	6387.850 ACRE FEET,			53.418 INCHES					
					SEASONAL PEAK DAILY FLOW	223.357 ACRE FEET,			112.608 CUBIC FEET PER SECOND					

TOTAL SEASONAL RUNOFF 6387.850 ACRE FEET, 53.418 INCHES
SEASONAL PEAK DAILY FLOW 223.357 ACRE FEET, 112.608 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
NORTH FISH CREEK 1435 ACRES

DAY	JAN	FEB	MAR	APR	1971							OCT	NOV	DEC	DAY
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV				
1					4.984	38.398	135.524	3.946	.876					1	
2					6.831	41.610	129.601	4.355	.920					2	
3					10.868	54.073	124.676	7.122	1.206					3	
4					14.498	55.909	102.849	15.830	1.942					4	
5					12.708	46.916	100.243	8.810	6.804					5	
6					11.183	60.638	79.757	4.479	2.501					6	
7					11.679	78.506	81.013	3.528	6.499					7	
8					10.735	97.793	69.051	3.023	3.956					8	
9					10.018	86.203	63.538	3.432	1.838					9	
10					9.084	83.842	56.363	3.446	1.321					10	
11					8.426	86.911	48.396	2.619	1.117					11	
12					9.851	103.806	41.580	3.831	.903					12	
13					15.484	119.648	35.896	2.971	.871					13	
14					24.897	137.254	31.085	2.432	.788					14	
15					30.936	155.022	20.637	2.057	.746					15	
16					38.819	160.449	10.661	1.836	.746					16	
17					35.718	171.533	8.107	1.716	.758					17	
18					25.842	163.084	7.596	1.797	1.519					18	
19					19.446	177.726	18.864	1.735	1.236					19	
20					15.991	182.344	8.618	1.547	1.380					20	
21					14.724	186.005	7.142	1.556	1.675					21	
22					5.091	16.622	172.134	11.736	1.705	2.048				22	
23					4.689	19.374	195.630	16.653	1.445	.791				23	
24					4.777	17.950	203.440	12.862	1.484					24	
25					5.221	22.857	195.869	9.685	1.433					25	
26					5.641	37.883	195.412	8.134	1.264					26	
27					5.144	58.454	200.528	6.958	1.698					27	
28					4.694	69.224	189.691	6.056	1.364					28	
29					4.486	79.418	160.944	5.465	1.671					29	
30					4.350	72.213	155.244	4.894	1.130					30	
31					46.181		4.306	1.084						31	
TOTAL					44.097	782.916	3956.575	1267.963	96.363	42.451				ACRE FEET	
A-F					.368	6.547	33.086	10.603	.805	.354				INCHES	
FLOW														MAXIMUM	
MAX					5.641	79.418	203.440	135.524	15.830	6.804				MINIMUM	
MIN					.000	4.984	38.398	4.306	1.084	.000					

TOTAL SEASONAL RUNOFF 6190.368 ACRE FEET,
SEASONAL PEAK DAILY FLOW 203.440 ACRE FEET, 51.766 INCHES
203.440 CUBIC FEET PER SECONO

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
SOUTH SOOA CREEK 2174 ACRES

C. South Soda Creek:

DAY	JAN	FEB	MAR	APR	1967							OCT	NOV	DEC	DAY
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV				
1					12.429	101.184	77.700	2.153	.831	.312				1	
2					10.354	141.538	64.158	1.635	.534	.374				2	
3					9.010	156.953	52.522	1.954	.462	.306				3	
4					8.069	144.517	56.296	1.727	.274	.395				4	
5					4.785	7.412	149.675	46.465	1.350	.234	.493			5	
6					5.374	7.198	150.186	37.712	1.233	.158	1.104			6	
7					7.775	7.606	138.178	55.100	4.428	.154	1.192			7	
8					10.533	14.296	121.799	42.198	3.999	.521	1.771			8	
9					10.335	24.802	107.339	30.126	2.149	.999	1.895			9	
10					9.650	26.923	106.817	23.135	2.295	.640	1.457			10	
11					14.308	21.506	104.504	20.983	1.799	1.079	1.167			11	
12					15.685	19.558	94.967	17.813	1.638	3.286	1.095			12	
13					11.612	18.856	94.477	15.157	1.393	1.368	1.029			13	
14					9.340	14.924	105.147	13.329	1.043	.811	.966			14	
15					8.495	12.544	87.776	14.136	.779	.612	.976			15	
16					7.834	11.929	92.522	13.022	.664	.687	.853			16	
17					7.392	20.915	110.448	28.994	.543	.846	.719			17	
18					8.538	40.417	145.478	28.379	.296	1.135	.655			18	
19					11.341	57.285	152.329	14.792	.188	2.582	.551			19	
20					15.366	63.873	175.626	11.034	.347	2.057	.440			20	
21					11.408	79.963	141.248	8.583	.534	1.046	.415			21	
22					9.460	111.652	144.549	7.168	.534	.744	.391			22	
23					8.075	133.149	133.722	9.370	.473	.499	.489			23	
24					7.119	151.880	125.968	10.403	.411	.606	.495			24	
25					6.418	178.693	126.243	7.113	.347	.930	.399			25	
26					5.973	186.286	119.260	5.288	.264	.917	.236			26	
27					6.240	157.100	111.829	4.322	.261	.856				27	
28					8.712	158.479	86.806	3.399	.271	.587				28	
29					14.888	132.085	86.265	2.866	.546	.395				29	
30					16.972	113.107	85.298	2.352	.821	.313				30	
31					95.150		2.274	.618						31	
TOTAL					253.640	1907.465	3642.662	726.199	36.710	26.178	20.188			ACRE FEET	
A-F					1.400	10.528	20.106	4.008	.202	.144	.111			INCHES	
FLOW														MAXIMUM	
MAX					16.972	186.286	175.626	77.700	4.428	3.286	1.895			MINIMUM	
MIN					.000	7.198	85.298	2.274	.188	.154	.000				

TOTAL SEASONAL RUNOFF 6613.045 ACRE FEET,
SEASONAL PEAK DAILY FLOW 186.286 ACRE FEET, 36.503 INCHES
93.918 CUBIC FEET PER SECONO

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
SOUTH SOOIA CREEK 2174 ACRES

DAY	1968											DAY
	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	OEC
1					16.045	131.584	80.568	4.837	.597	.434		1
2					23.465	148.461	81.114	2.648	.340	.376		2
3					29.755	151.693	78.183	2.631	1.091	.292		3
4					37.627	154.561	75.965	1.951	1.799	.305		4
5					36.854	177.223	66.318	1.432	1.307	.325		5
6					28.947	169.242	57.565	1.369	.703	.310		6
7					20.687	156.136	50.908	1.353	.412	.681		7
8					16.562	127.052	43.431	1.236	.528	1.333		8
9					17.672	94.551	41.711	2.170	.586	1.173		9
10					23.969	79.399	41.213	2.078	.450	1.159		10
11					33.290	78.897	36.339	2.385	.417	1.932		11
12					39.494	121.018	30.955	2.403	.520	2.653		12
13					31.674	166.153	25.293	2.488	.539	2.369		13
14					23.180	168.923	20.579	10.528	.382	1.647		14
15					18.761	188.236	17.809	6.695	.534	2.747		15
16					16.283	182.224	14.436	3.462	.518	2.478		16
17				4.711	14.371	176.871	11.669	2.076	.746	.696		17
18				4.755	13.689	185.114	9.577	2.287	1.154			18
19				5.060	15.119	191.134	8.110	1.616	.840			19
20				4.681	18.240	213.705	7.122	1.175	.350			20
21				4.570	34.581	199.389	6.210	1.125	1.023			21
22				4.274	59.118	192.021	6.487	.859	1.327			22
23				4.097	53.182	170.664	6.649	2.136	1.178			23
24				4.023	36.080	148.259	4.607	1.647	.898			24
25				3.879	28.527	119.997	3.769	.799	.678			25
26				3.716	26.061	124.223	3.225	.584	.594			26
27				3.498	32.264	150.286	2.834	.630	.421			27
28				3.542	56.248	143.341	2.444	1.161	.432			28
29				4.480	87.110	132.264	2.111	1.976	.423			29
30				8.372	100.157	90.006	4.381	1.273	.440			30
31					120.215		3.985	.829				31
TOTAL												
A-F					63.665	1109.242	4532.642	845.585	69.852	21.243	20.918	
INS					.351	6.122	25.019	4.667	.385	.117	.115	
FLOW												
MAX					8.372	120.215	213.705	81.114	10.528	1.799	2.747	
MIN					.000	13.689	78.897	2.111	.584	.340	.000	
												MAXIMUM MINIMUM

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
SOUTH SOOA CREEK 2174 ACRES

DAY	1969											DAY
	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	OEC
1				35.424	81.019	33.501	4.288	.452	4.261			1
2				3.606	55.074	80.653	29.495	3.129	.398	3.124		2
3				3.618	64.380	82.999	28.227	2.868	.366	4.146		3
4				3.920	62.094	88.950	26.059	2.707	.337	4.631		4
5				4.871	61.206	111.739	35.274	2.193	.370	5.102		5
6				8.137	75.494	106.208	25.012	1.894	.267	5.490		6
7				9.821	81.975	97.395	18.568	1.441	.239	6.820		7
8				7.722	63.129	98.861	15.587	1.140	.228	7.462		8
9				7.379	77.771	90.978	13.038	.947	.331	6.204		9
10				9.586	92.788	68.258	11.097	.835	4.038	5.530		10
11				12.929	100.582	52.898	9.427	.862	1.453	5.973		11
12				13.884	105.946	54.360	8.159	3.041	.665	5.530		12
13				11.275	110.702	55.847	7.227	2.573	.674	5.100		13
14				12.283	103.132	53.850	10.471	1.249	1.164	5.100		14
15				14.153	87.063	54.141	8.878	.890	1.209	2.921		15
16				11.348	74.060	84.089	5.712	.760	1.905			16
17				10.333	82.886	72.698	4.774	.717	1.464			17
18				11.509	114.785	62.232	4.622	1.922	.881			18
19				13.864	134.580	60.378	4.248	1.792	.621			19
20				21.629	128.656	58.119	17.220	3.356	.526			20
21				30.014	132.212	54.717	9.488	2.990	1.186			21
22				44.444	146.126	54.940	5.677	1.515	7.584			22
23				57.244	134.426	46.234	4.519	1.052	5.454			23
24				62.583	134.376	88.416	3.736	.977	3.234			24
25				52.481	149.661	57.995	3.319	.879	2.155			25
26				34.692	152.297	48.203	2.735	.562	1.634			26
27				25.064	140.364	65.816	2.286	.426	1.333			27
28				19.524	134.429	67.250	1.943	.454	1.075			28
29				18.559	142.830	48.612	5.158	1.369	.942			29
30				22.457	134.473	38.937	15.254	1.362	5.340			30
31					108.512		7.070	.768				31
TOTAL												
A-F				558.946	3221.447	2086.807	377.795	50.973	47.540	77.400		ACRE FEET
INS				3.085	17.781	11.518	2.085	.281	.262	.427		INCHES
FLOW												
MAX				62.583	152.297	111.739	35.274	4.288	7.584	7.462		MAXIMUM
MIN				.000	35.424	38.937	1.943	.426	.228	.000		MINIMUM

TOTAL SEASONAL RUNOFF 6420.912 ACRE FEET, 35.442 INCHES
SEASONAL PEAK DAILY FLOW 152.297 ACRE FEET, 76.782 CUBIC FEET PER SECOND

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
SOUTH SODA CREEK 2174 ACRES

DAY	JAN	FEB	MAR	APR	1970							DAY
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	
1					6.904	96.432	93.355	1.859	.097	.601		1
2					6.592	114.369	86.125	1.555	.162	.465		2
3					8.024	138.673	81.599	1.461	.114	.439		3
4					13.394	156.585	79.699	1.305	.069	.454		4
5					23.281	162.827	70.786	1.552	.305	.467		5
6					33.071	152.305	79.565	1.168	1.541	2.189		6
7					36.811	149.986	66.547	2.055	3.768	3.171		7
8					30.252	170.418	49.706	1.633	7.235	2.454		8
9					21.599	155.552	50.461	.983	4.529	2.489		9
10					17.981	131.761	44.554	.677	2.071	3.255		10
11					24.950	92.966	34.186	.478	1.146	3.498		11
12					35.666	68.259	28.149	.298	1.013	5.054		12
13					34.075	73.974	22.932	.267	2.466	3.302		13
14					28.587	91.351	18.858	.286	1.373			14
15					24.398	89.658	15.428	.292	1.116			15
16					4.196	40.203	100.238	12.547	.254	.840		16
17					3.879	73.217	128.299	10.705	.318	.683		17
18					3.879	90.899	158.745	9.225	.429	.555		18
19					3.879	101.721	165.973	13.448	.291	.400		19
20					3.685	119.251	167.393	10.407	.306	.378		20
21					3.746	128.130	187.287	7.625	.810	.642		21
22					4.069	119.515	184.040	9.806	.394	1.408		22
23					3.456	117.805	189.898	12.956	.226	1.893		23
24					3.310	124.931	185.369	7.006	.120	1.749		24
25					3.944	127.937	185.984	5.536	.088	1.611		25
26					6.818	148.881	174.798	6.475	.000	1.415		26
27					11.797	163.048	167.622	5.555	.000	1.322		27
28					13.911	133.343	169.009	4.104	.079	1.062		28
29					9.559	108.252	143.525	3.311	.123	.863		29
30					7.804	139.284	113.308	2.740	.048	.783		30
31					122.150		2.250	.059				31
TOTAL					87.938	2204.167	4266.619	945.662	19.427	42.627	27.845	
A-F					.485	12.166	23.550	5.219	.107	.235	.153	ACRE FEET INCHES
FLOW												
MAX					13.911	163.048	189.898	93.355	2.055	7.235	5.054	MAXIMUM
MIN					.000	6.592	68.259	2.250	.000	.069	.000	MINIMUM
TOTAL SEASONAL RUNOFF					7594.289	ACRE FEET,			41.919	INCHES		
SEASONAL PEAK DAILY FLOW					189.899	ACRE FEET,			95.739	CU8IC FEET PER SECOND		

STREAMFLOW SUMMARY IN ACRE FEET FOR PERIOD OF RECORD
SOUTH SODA CREEK 2174 ACRES

DAY	JAN	FEB	MAR	APR	1971							DAY
					MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	
1					14.988	65.972	94.022	2.069	.066	.925		1
2					25.763	73.291	89.215	1.976	.066	.753		2
3					43.742	86.813	84.150	2.363	.082	.965		3
4					48.372	84.852	71.312	2.853	.333	1.718		4
5					38.179	76.803	65.835	3.085	.962	1.922		5
6					33.155	93.903	53.825	1.650	.876	1.595		6
7					35.275	121.047	52.291	1.371	2.099	1.177		7
8					30.459	132.990	46.633	1.149	2.331	.508		8
9					26.106	124.413	42.419	1.247	.672			9
10					21.390	115.928	37.332	1.310	.347			10
11					20.608	112.416	32.544	.900	.241			11
12					31.969	136.319	28.411	.968	.188			12
13					19.926	53.807	151.140	25.159	1.120	.188		13
14					27.821	73.076	178.491	22.197	.840	.140		14
15					33.730	81.222	198.358	18.870	.585	.066		15
16					36.768	91.357	190.950	15.516	.534	.066		16
17					35.587	72.690	203.066	12.996	.534	.186		17
18					28.001	46.762	183.649	12.359	.249	.277		18
19					25.149	35.488	195.786	15.040	.120	.297		19
20					20.211	29.434	196.953	11.499	.079	.366		20
21					16.342	29.179	193.632	9.479	.145	.384		21
22					14.102	37.790	199.678	10.413	.066	.427		22
23					12.386	39.516	185.758	9.397	.066	.652		23
24					13.021	35.105	185.289	7.921	.084	1.020		24
25					14.999	49.456	170.584	6.122	.097	1.169		25
26					16.567	80.043	159.535	5.022	.066	.949		26
27					13.797	113.504	153.185	4.126	.076	.519		27
28					11.943	131.597	140.001	3.482	.122	.376		28
29					11.325	149.780	117.844	3.112	.117	.347		29
30					11.152	119.912	109.894	2.655	.066	.716		30
31					72.379		2.294	.066				31
TOTAL					362.835	1712.115	4338.553	895.661	25.988	16.423	9.565	
A-F					2.002	9.450	23.947	4.943	.143	.090	.052	ACRE FEET INCHES
FLOW												
MAX					36.768	149.780	203.066	94.022	3.085	2.331	1.922	MAXIMUM
MIN					.000	14.988	65.972	2.294	.066	.066	.000	MINIMUM
TOTAL SEASONAL RUNOFF					7361.144	ACRE FEET,			40.632	INCHES		
SEASONAL PEAK DAILY FLOW					203.067	ACRE FEET,			102.378	CU8IC FEET PER SECOND		

TOTAL SEASONAL RUNOFF 7361.144 ACRE FEET,
SEASONAL PEAK DAILY FLOW 203.067 ACRE FEET, 102.378 CU8IC FEET PER SECOND

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